premio
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Aries/Centella

USER MANUAL

System Manual

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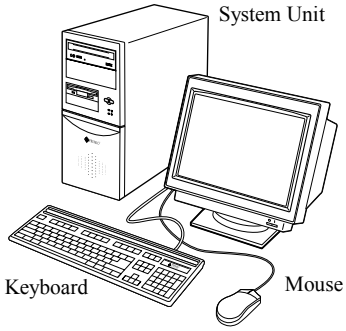
Getting Started

Your Premio® system consists of three components:

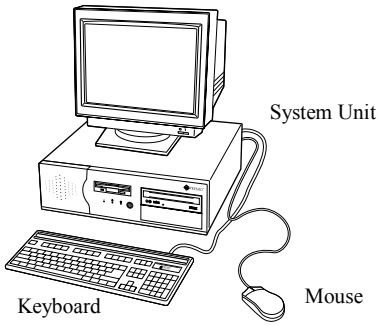
- a mid-tower or desktop system unit
- a keyboard
- a mouse

Add your choice of monitor, and your system is ready to use.

Mid-tower system



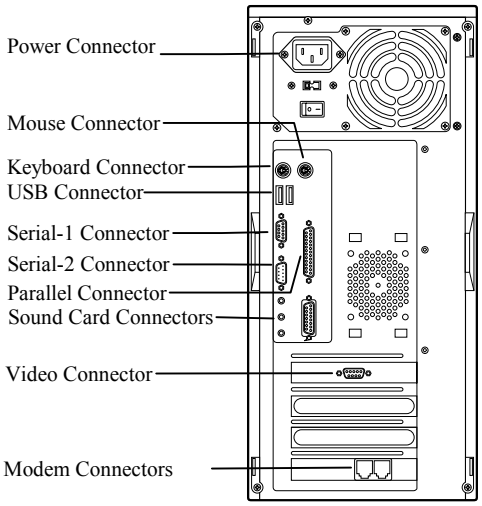
Desktop system



Setting Up

To set up your Premio system, simply connect your monitor, the mouse, the keyboard, and any additional components you want to use to the system unit.

Follow these easy steps:



1. Attach your monitor's video cable to the video connector.
2. Attach the mouse cable to the mouse connector.
3. Attach the keyboard cable to the keyboard connector.
4. Attach the cables for any additional components, such as a printer, scanner, or modem, to the respective parallel, serial, or universal serial bus (USB) connector, as directed in the component's manual.
5. If your system is equipped for multimedia, attach your speakers and microphone to the sound card connectors.
6. Plug your monitor's power cord into a power outlet.
7. Attach the female end of the system power cord to the system unit's power connector, and then plug the other end of the cord into a power outlet.

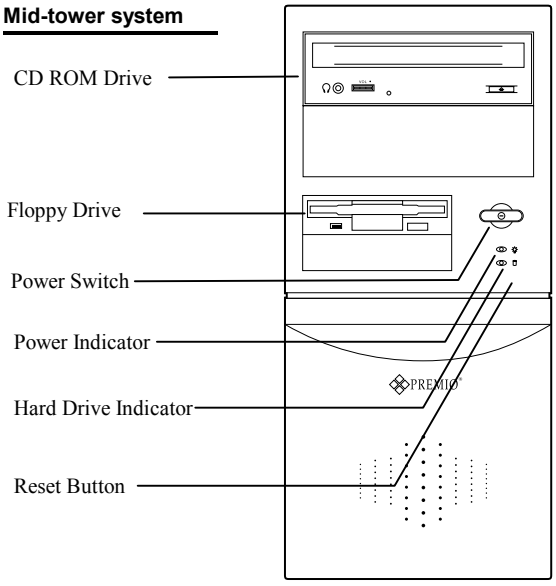
Your Premio system is now ready to use. To start the system, turn on your monitor's power switch and then press the system power switch as shown on the next page.

Switches and Indicators

The system unit's front panel provides access to the CD-ROM and floppy drives, and to the system's switches and indicator lights.

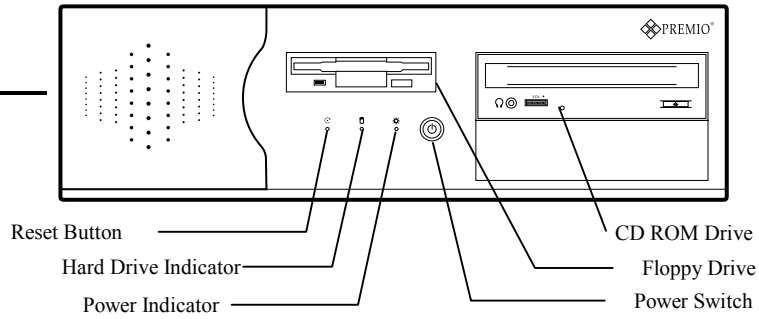
The illustration below shows a mid-tower system. If you have a desktop system, turn to the illustration on the next page.

Mid-tower system



- The **CD-ROM drive** reads information on CDs.
- The **floppy drive** reads and writes information on diskettes.
- The **power switch** turns the system on and off.
- The **hard drive indicator** lights when the hard drive is in use.
- The **power indicator** lights when the system is on.
- The **reset button** restarts the system.

Desktop system



- The **reset button** restarts the system.
- The **hard drive indicator** lights when the hard drive is in use.
- The **power indicator** lights when the system is on.
- The **power switch** turns the system on and off.
- The **CD-ROM drive** reads information on CDs.
- The **floppy drive** reads and writes information on diskettes.

Upgrading

You can upgrade your Premio system with:

- Expansion cards
- More memory
- An additional hard drive

To install an upgrade, you must open the system unit. Before proceeding, read the important cautionary note below. Then follow the steps on the next page.

Caution! *Static discharge can cause permanent damage to internal electronic components of your computer. Always use the following precautions when working inside the system unit:*

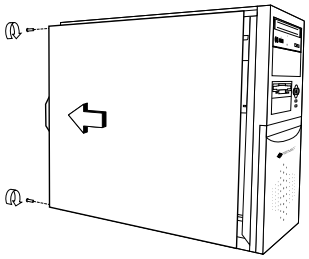
- *Wear a grounding wrist strap (available at most electronics stores) when handling electronic components.*
- *Do not remove a component from its antistatic packaging until you are ready to install it.*
- *Keep one hand in contact with the metal system case.*

Opening the System Unit

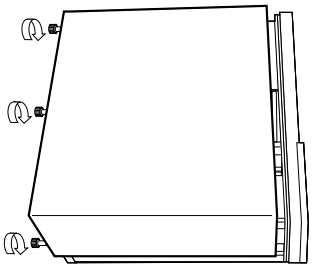
Note: *Opening the system unit could affect your warranty. Check with the dealer where you purchased your system before opening the system unit.*

To open the system unit, follow these steps:

Mid-tower system



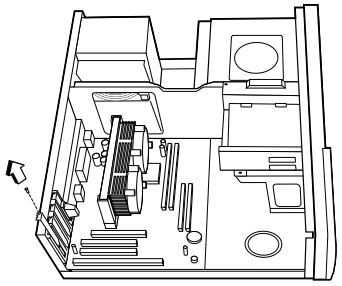
Desktop system



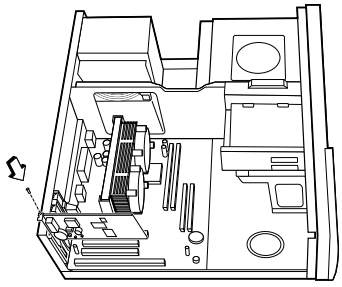
1. Turn off the system and unplug the power cord.
2. Remove the screws securing the side panel (mid-tower) or case (desktop) at the rear of the system unit.
3. Slide the side panel or case up and to the rear, and remove it.

Installing an Expansion Card

To install an expansion card, open the system unit as described on the previous page. Then follow these steps:



1 Remove the screw securing the slot bracket cover for the expansion slot you want to use. Save the screw to secure the expansion card.



2 Insert the expansion card firmly into the slot, making sure it is seated completely.

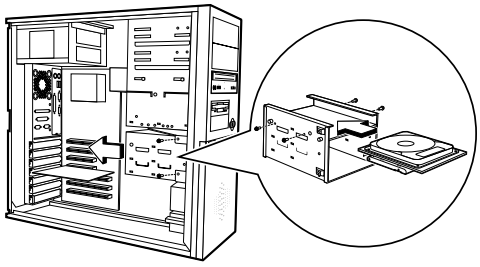
3 Secure the card with the saved screw.

Installing a Hard Drive

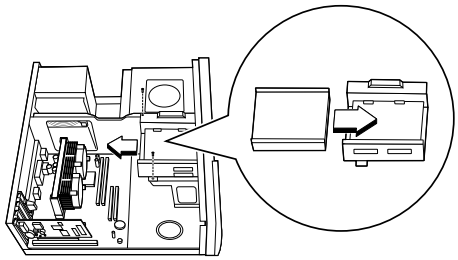
To install a hard drive in your system, follow these steps:

1. Disconnect the hard drive cable and power connector.

Mid-tower system



Desktop system



2. Remove the two screws securing the drive bay.
3. Slide the bay toward the rear of the system unit to remove it.
4. Insert the new drive into an open position in the bay and secure it with four screws.
5. Slide the bay back into the system unit and secure it with two screws.
6. Connect the cables.

Getting Help

Troubleshooting

Your Premio system is designed to provide years of trouble-free performance. If you have a problem with your system, first check the information in this section for a quick solution.

Monitor Does Not Work

If your monitor appears not to be working properly:

- Check that the monitor's power cable is securely attached to the monitor and to an outlet that is receiving power.
- Check that the monitor's video cable is securely attached to the monitor and to the system unit's video card connector.
- Check that the monitor's power switch is on.
- Adjust the monitor's brightness and contrast controls.
- If possible, substitute another monitor that is in good working order. If the substitute works, your monitor may need repair or replacement.

Keyboard Does Not Work

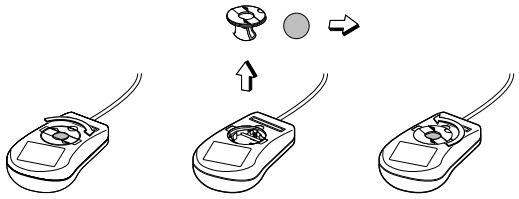
If the NumLock indicator in the upper right corner of the keyboard does not light when the system powers up, or the keyboard does not work:

- Check that the keyboard cable is securely attached to the system unit's keyboard connector.
- If possible, substitute another keyboard that is in good working order. If the substitute works, your keyboard may need replacement.

Mouse Does Not Work

If your mouse pointer does not move or moves erratically when you move the mouse:

- Check that the mouse cable is securely attached to the mouse connector on the system unit.
- Disassemble the mouse and clean the roller ball.



System Unit Problems

The fan inside the system unit should make a low, steady sound when operating properly.

If the fan is totally silent:

- Check that the system power cord is securely attached to the back of the system unit and to a power outlet. Verify that the outlet has power.
- If possible, substitute another power cord that is in good working order. If the substitute works, replace your power cord.

If the fan makes excessive noise:

- Turn off the system, open the system unit case, and inspect the fan for any obstructions.
- Turn on the system and listen closely to the fan. If the noise comes from inside the fan housing, your power supply may need replacement.

Hard Drive Problems

Your hard drive should make a slight whirring sound when operating properly.

If the drive is totally silent:

- Turn off the system, open the system unit case, and check that the power cable between the power supply and the hard drive is securely attached at both ends. If it is, your hard drive may be defective.

If the hard drive makes excessive noise:

- Turn off the system, open the system unit case, and remove the hard drive power cable connector from the hard drive. Then turn the system back on. If the noise disappears, your hard drive may be defective.
- If you have more than one hard drive, repeat the same procedure for each drive.

Technical Support

You can contact Premio technical support at the following address:

Premio Computer, Inc.
918 Radecki Court
City of Industry, CA 91748

Telephone: 626.839.3100
Fax: 626.839.3191
Email: support@premiopc.com
Web page: http://support.premiopc.com

Premio on the Internet

Premio maintains a web page on the Internet with the latest information on Premio products, updated drivers, answers to common problems, a troubleshooting guide, and more. Visit our web page at:

http://www.premiopc.com

Appendix

Warranty Policy

Premio Computer, Inc. warrants its line of Premio® computer systems to be free from defects in material and workmanship for a specific warranted period as stated below, from the date of original purchase from Premio Computer, Inc. or a Premio Computer, Inc. authorized reseller. This warranty is contingent upon proper use of the product in question and does not cover products which have been modified or which have been subjected to unusual physical or electrical stress. Warranty for third party hardware and software, if any, is subject to the third party's warranty policy. Please refer to the following for length of warranty for Premio's product line.

Premio Product	**Warranty**
Complete Premio System with monitor	3 years parts and labor
Premio Barebone (with or without CPU)	2 years parts and labor
Premio Monitor	2 year parts and labor
Premio OEM Component (motherboard, speaker, case, keyboard, mouse, floppy drive, CD-ROM, etc.)	2 years parts and labor

Service Under Warranty

If this product fails to be in good working order during the warranty period (or specific period of time as noted above), Premio Computer, Inc. will, at its option, repair or replace the product. Repair parts and/or replacement products may be either new or reconditioned at Premio Computer Inc.'s discretion. The limited warranty does not include service or repair for damage from improper installation, abuse or modifications to the product not approved in writing by Premio Computer, Inc. Any service repair outside the scope of this limited warranty will be at Premio Computer, Inc.'s or its Authorized Service Provider's rates and terms in effect. This warranty is valid only within the United States, Puerto Rico, Canada, Mexico and South America.

Exclusions from Limited Warranty Programs

All other expressed and implied warranties for this product are hereby disclaimed. If this product is not in good working order as warranted above, Premio Computer's sole and exclusive remedy shall be repair or replacement as stated above. In no event will Premio Computer, Inc. be liable to the customer or any third party for any damages in excess of the purchase price of the product. This limitation applies to damages of any kind including any direct or indirect damages, lost profits, lost savings or other special, incidental or consequential damages. This holds true for situations even if Premio Computer, Inc. or an authorized Premio representative or dealer has been advised of the possibility of such damages or of any claim by another party. Some states do not allow the exclusion or limitation of incidental or consequential damages for some products, so the above limitation or exclusion may not apply to you. Premio Computer, Inc. authorized resellers and service providers/partners may be changed, added or deleted, without notice or liability. Premio Computer, Inc. disclaims any authorized resellers and service provider/partner to the program. This warranty gives you specific legal rights and you may also have other rights, which may vary from state to state.

FCC Standards

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Important Safety Instructions

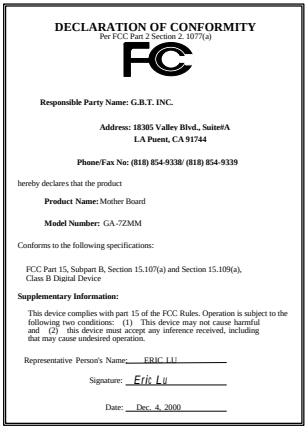
These instructions are provided by Underwriters Laboratories, Inc.

1. Read all of these instructions and save them for later reference.
2. Follow all warnings and instructions marked on the product.
3. Unplug this product from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this product near water.
5. Do not place this product on an unstable cart, stand or table. The product may fall, causing serious damage to the product.
6. Slots and openings on the cabinet and the back or bottom are provided for ventilation. To ensure reliable operation of the product and to protect it from overheating, do not block or cover these openings. The openings should never be blocked by placing the product on a bed, sofa, rug or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
8. This product is equipped with a 3-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.
9. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be walked on.
10. If an extension cord is used with this product, make sure that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord ampere rating. Also, make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.
11. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts

that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.

12. Except as explained elsewhere in this manual, don't attempt to service this product yourself. Opening and removing those covers that are marked “Do Not Remove” may expose you to dangerous voltage points or other risks. Refer all servicing on those compartments to service personnel.
13. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    A. When the power cord or plug is damaged or frayed.
    B. If liquid has been spilled into the product.
    C. If the product has been exposed to rain or water.
    D. If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
    E. If the product has been dropped or the cabinet has been damaged.
    F. If the product exhibits a distinct change in performance, indicating a need for service.

FCC Compliance Statement:



DECLARATION OF CONFORMITY
Per FCC Part 2 Section 2. 1077(a)

Responsible Party Name: G.B.T. INC.

Address: 18305 Valley Blvd., Suite#A
LA Puent, CA 91744

Phone/Fax No: (818) 854-9338/ (818) 854-9339

hereby declares that the product

Product Name: Mother Board

Model Number: GA-7ZMM

Conforms to the following specifications:

FCC Part 15, Subpart B, Section 15.107(a) and Section 15.109(a), Class B Digital Device

Supplementary Information:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful and (2) this device must accept any inference received, including that may cause undesired operation.

Representative Person's Name: ERIC LU

Signature: Eric Lu

Date: Dec. 4, 2000

This equipment has been tested and found to comply with limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in residential installations. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television equipment reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna

-Move the equipment away from the receiver

-Plug the equipment into an outlet on a circuit different from that to which the receiver is connected

-Consult the dealer or an experienced radio/television technician for additional suggestions

You are cautioned that any change or modifications to the equipment not expressly approve by the party responsible for compliance could void Your authority to operate such equipment.

This device complies with Part 15 of the FCC Rules. Operation is subjected to the following two conditions 1) this device may not cause harmful interference and 2) this device must accept any interference received, including interference that may cause undesired operation.

Declaration of Conformity

We, Manufacturer/Importer
(full address)

G.B.T. Technology Träding GMbH
Ausschlager Weg 41, 1F, 20537 Hamburg, Germany

declare that the product
(description of the apparatus, system, installation to which it refers)

Mother Board
GA-7ZMM

is in conformity with
(reference to the specification under which conformity is declared)
in accordance with 89/336 EEC-EMC Directive

☐ **EN 55011**	Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM high frequency equipment	☐ **EN 61000-3-2*** ☒ **EN60555-2**	Disturbances in supply systems caused by household appliances and similar electrical equipment "Harmonics"
☐ **EN55013**	Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment	☐ **EN61000-3-3*** ☒ **EN60555-3**	Disturbances in supply systems caused by household appliances and similar electrical equipment "Voltage fluctuations"
☐ **EN 55014**	Limits and methods of measurement of radio disturbance characteristics of household electrical appliances, portable tools and similar electrical apparatus	☒ **EN 50081-1**	Generic emission standard Part 1: Residual, commercial and light industry
		☒ **EN 50082-1**	Generic immunity standard Part 1: Residual, commercial and light industry
☐ **EN 55015**	Limits and methods of measurement of radio disturbance characteristics of fluorescent lamps and luminaries	☐ **EN 55081-2**	Generic emission standard Part 2: Industrial environment
☐ **EN 55020**	Immunity from radio interference of broadcast receivers and associated equipment	☐ **EN 55082-2**	Generic immunity standard Part 2: Industrial environment
☒ **EN 55022**	Limits and methods of measurement of radio disturbance characteristics of information technology equipment	☐ **ENV 55104**	Immunity requirements for household appliances tools and similar apparatus
☐ **DIN VDE 0855** ☐ **part 10** ☐ **part 12**	Cabled distribution systems; Equipment for receiving and/or **distribution** from sound and television signals	☐ **EN 50091- 2**	EMC requirements for uninterruptible power systems (UPS)
☒ **CE marking**		CE (EC conformity marking)	

The manufacturer also declares the conformity of above mentioned product with the actual required safety standards in accordance with LVD 73/23 EEC

☐ **EN 60065**	Safety requirements for mains operated electronic and related apparatus for household and similar general use	☐ **EN 60950**	Safety for information technology equipment including electrical business equipment
☐ **EN 60335**	Safety of household and similar electrical appliances	☐ **EN 50091-1**	General and Safety requirements for uninterruptible power systems (UPS)

Manufacturer/Importer

Signature : *Rex Lin*

(Stamp)

Date : Dec. 4, 2000

Name : Rex Lin

7ZMM Series

AMD Athlon™/Duron™ Socket A Processor Motherboard

USER'S MANUAL

AMD Athlon™/Duron™ Socket A Processor Motherboard
REV. 1.2 First Edition
R-12-01-001201

How This Manual Is Organized

This manual is divided into the following sections:

1) Revision History	Manual revision information
2) Item Checklist	Product item list
3) Features	Product information & specification
4) Hardware Setup	Instructions on setting up the motherboard
5) Performance & Block Diagram	Product performance & block diagram
6) Suspend to RAM	Instructions STR installation
7) @BIOS™ & EasyTuneIII™	@BIOS™ & EasyTuneIII™ introduction
8) BIOS Setup	Instructions on setting up the BIOS software
9) Appendix	General reference

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Revision History

Revision	Revision Note	Date
1.2	Initial release of the 7ZMM Series motherboard user's manual.	Dec. 2000

The author assumes no responsibility for any errors or omissions that may appear in this document nor does the author make a commitment to update the information contained herein. Third-party brands and names are the property of their respective owners.

Dec. 1, 2000 Taipei, Taiwan, R.O.C

Item Checklist

☑The 7ZMM Series motherboard

☑Cable for IDE / floppy device

☑Diskettes or CD (GA-7ZMM CD) for motherboard driver & utility

☑7ZMM Series user's manual

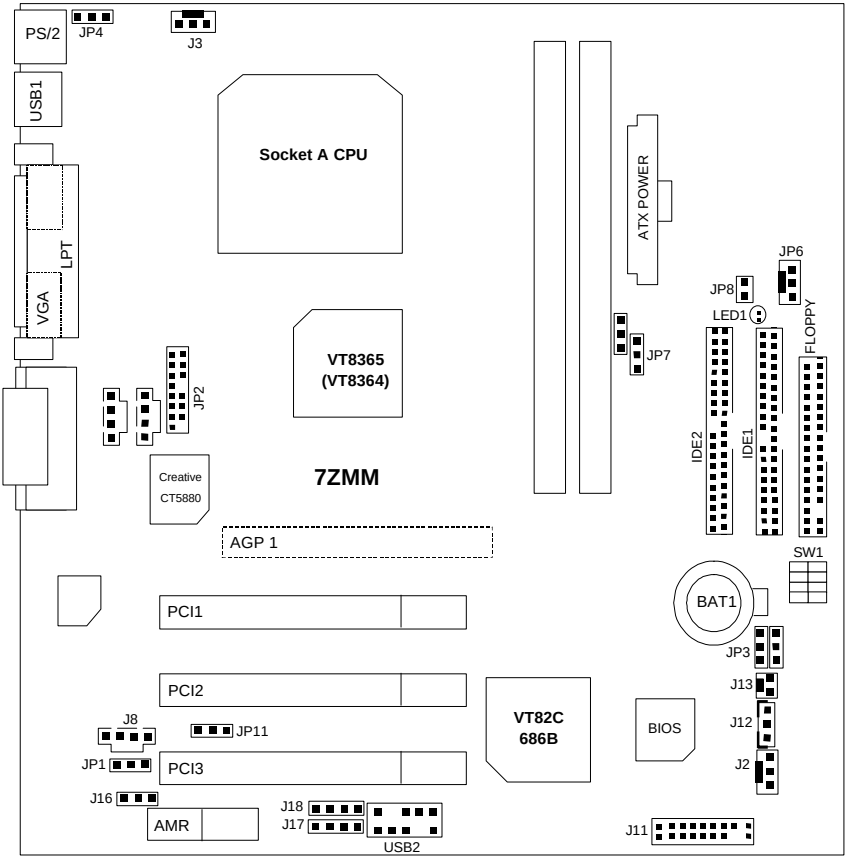
Feature Summary

Form Factor	• 24.4 cm x 22.2 cm Micro ATX size form factor, 4 layers PCB.
Motherboard	• 7ZMM series includes 7ZMM, 7ZMM-1
CPU	• AMD Athlon™/Duron™ (K7) Socket A Processor • 256K/64K L2 cache on die • Supports 600MHz ~ 1GHz and above
Chipset	Pro Savage KM133, consisting of: • VT8365 Memory/AGP/PCI Controller (PAC)[For 7ZMM] • VT8364 Memory/AGP/PCI Controller (PAC)[For 7ZMM-1] • VT82C686B PCI Super-I/O Integrated Peripheral Controller (PSIPC)
Clock Generator	• ICS 9248BF-141 100/102/104/106/108/110/112/133 MHz system bus speeds
Memory	• 2 168-pin DIMM sockets • Supports PC-100/133 and VCM SDRAM • Supports up to 1.0GB DRAM • Supports only 3.3V SDRAM DIMM
I/O Control	• VT82C686B
Slots	• 1 AGP slot supports 4X mode & AGP 2.0 compliant (7ZMM-1 does not have AGP slot) • 3 PCI slots supports 33MHz & PCI 2.2 compliant • 1 AMR (Audio Modem Riser) slot
On-Board IDE	• 2 IDE bus master (UDMA 33/ATA 66/ATA100) IDE ports for up to 4 ATAPI devices • Supports PIO mode 3, 4 (UDMA 33/ATA 66/ATA100) IDE & ATAPI CD-ROM
On-Board Peripherals	• 1 floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88M bytes • 1 parallel port supports Normal/EPP/ECP mode • 1 serial port (COM A) • 4 USB ports
Hardware Monitor	• CPU/System fan revolution detection • CPU/Power/System fan control • System voltage detection • CPU/System temperature detection

To be continued...

PS/2 Connector	• PS/2® Keyboard interface and PS/2® Mouse interface
On-Board VGA	• Build S3 Savage4 (86C370) in VT8365(VT8364) • Support shared memory architecture
On-Board Sound	• Creative CT5880 sound • AC '97 CODEC • Line In / Line Out / Mic In / AUX In / CD In / TEL / SPDIF / Game Port / Four Speaker
BIOS	• Licensed AMI BIOS, 2M bit flash ROM
Additional Features	• Support Wake-On-LAN (WOL) • Support Internal / External Modem Ring On • Support USB KB/MS Wake up from S3-S5 • Includes 3 fan power connectors • Poly fuse for keyboard over-current protection • Support STR (Suspend-To-RAM) function • Support @BIOS™ and EasyTuneIII™

7ZMM Series Motherboard Layout



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JP1 (Front MIC Function)	P.19
JP3 (Clear CMOS Function) [Optional]	P.19
JP4 (USB Device Wake up Selection)	P.20
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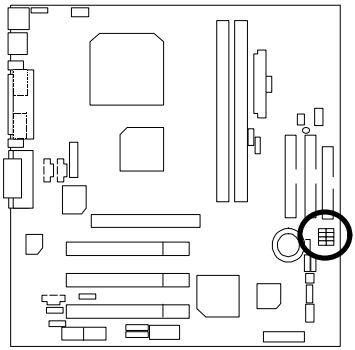
CPU Speed Setup

The system bus speed is selectable at 100MHz. The user can select the system bus speed by DIP switch **SW1**.

SW1: CPU Speed Setup



SW1: **O: ON, X: OFF**

FSB	1	2	3	4
95	O	O	X	O
100	X	O	X	X
102	0	0	X	X
103	X	O	X	O
107	O	X	O	0
110	0	X	0	X
113	X	X	O	O
115	X	X	X	0
133	X	X	X	X

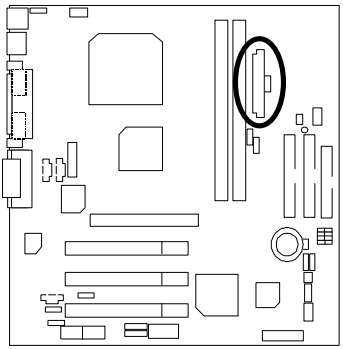
AMD CPU Heat Sink Installation:

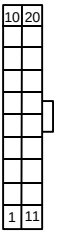
Beware: Please check that the heat sink is in good contact with the CPU before you turn on your system.

The poor contact will cause over heat, and might cause damage to your processor.

Connectors

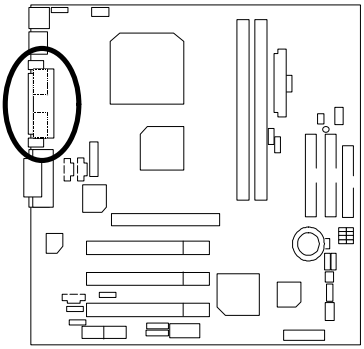
ATX Power

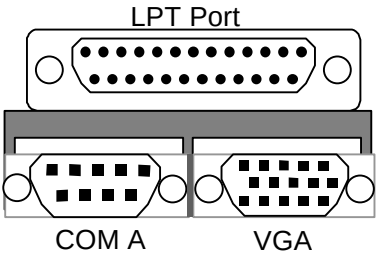




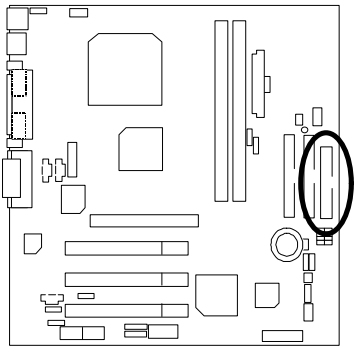
Pin No.	Definition
3,5,7,13, 15-17	GND
1,2,11	3.3V
4,6,19,20	VCC
10	+12V
12	-12V
18	-5V
8	Power Good
9	5V SB stand by+5V
14	PS-ON(Soft On/Off)

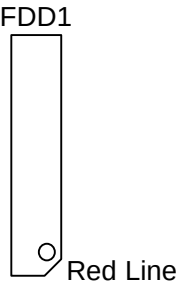
COM A / VGA / LPT Port



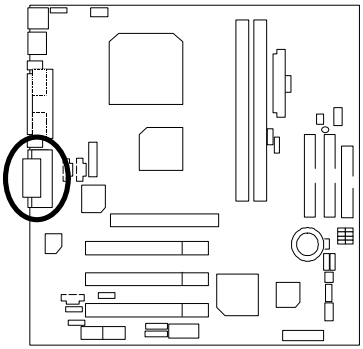


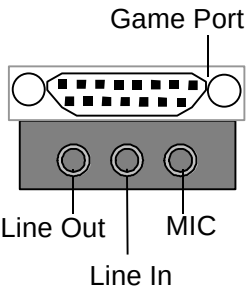
Floppy Connector





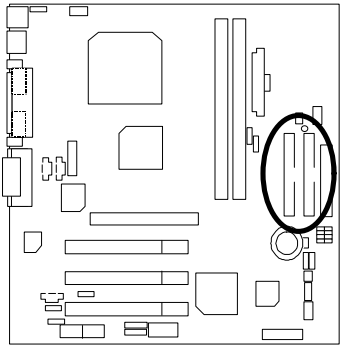
Game & Audio Port

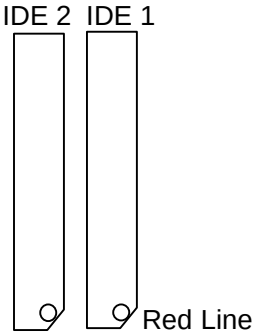




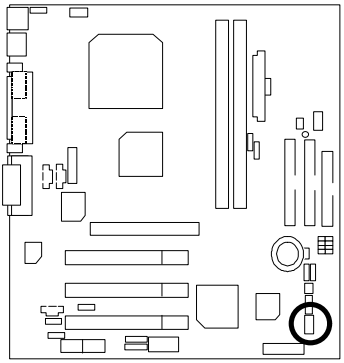
Line Out 1: Line Out or SPDIF (The SPDIF output is capable of providing digital audio to external speakers or compressed AC3 data to an external Dolby digital decoder). To enable SPDIF, simply insert SPDIF connector into Line Out1. Line Out1 will become SPDIF Out automatically. (see page 34 for more information).
To enable Four Speaker (for Creative 5880 audio only), simply follow instructions on page 32 and Line In will become Line Out2 to support second pair of stereo speakers.

IDE1 (Primary), IDE2 (Secondary) Connector



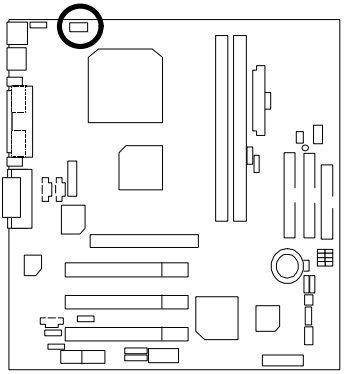


J2: Sysem Fan



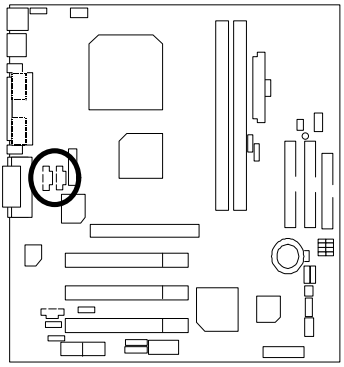
Pin No.	Definition
1	Control
2	+12V
3	SENSE

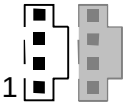
J3: CPU Fan



Pin No.	Definition
1	Control
2	+12V
3	SENSE

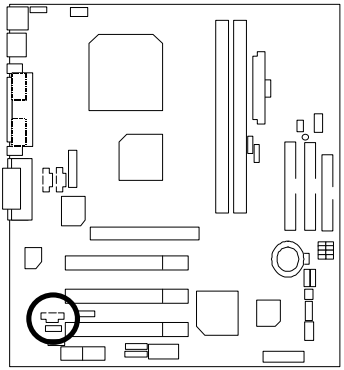
J7: AUX_IN

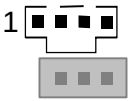




Pin No.	Definition
1	AUX-L
2	GND
3	GND
4	AUX-R

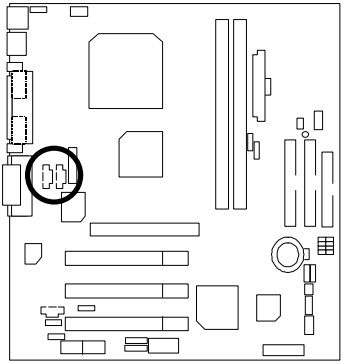
J8 TEL: The connector is for Modem with internal voice connector

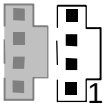




Pin No.	Definition
1	Signal-In
2	GND
3	GND
4	Signal-Out

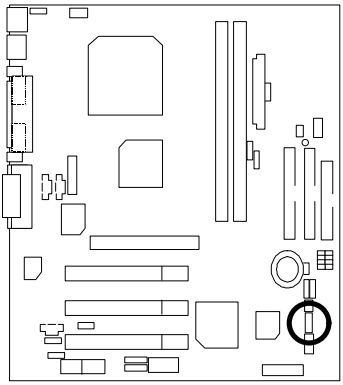
J9: CD Audio Line In

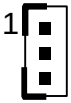




Pin No.	Definition
1	CD-L
2	GND
3	GND
4	CD-R

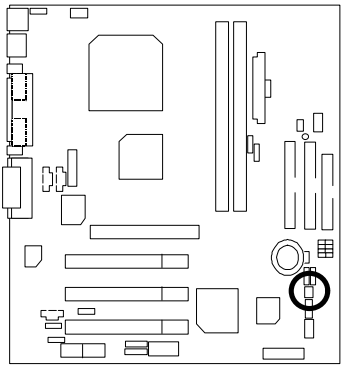
J12: Wake On LAN





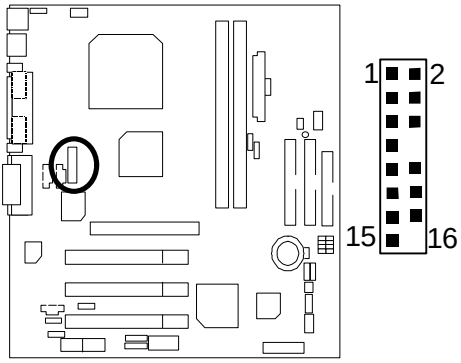
Pin No.	Definition
1	+5V SB
2	GND
3	Signal

J13: Ring Power On (Internal Modem Card Wake Up)



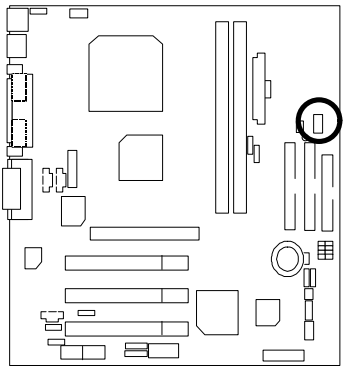
Pin No.	Definition
1	Signal
2	GND

JP2: Front Audio



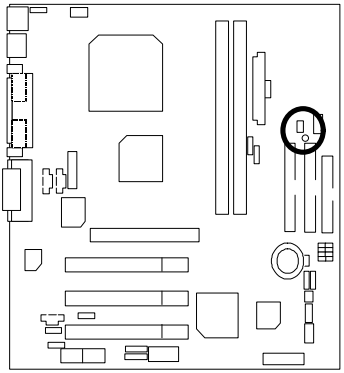
Pin No.	Definition
1	Incase speaker (R)
2	Incase speaker (L)
3,4,5,6, 10,15	GND
7	+12V
8,16	NC
9	MIC
11	Front Audio (R)
13	Front Audio (L)
12	Rear Audio (R)
14	Rear Audio (L)

JP6: Power Fan

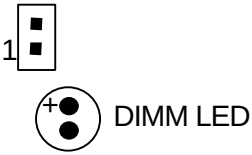


Pin No.	Definition
1	Control
2	+12V
3	NC

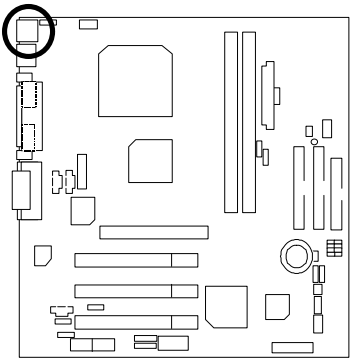
JP8 / LED1: STR LED Connector & DIMM LED

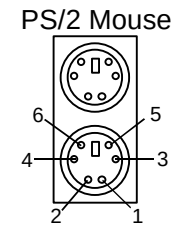


STR LED Connector External.



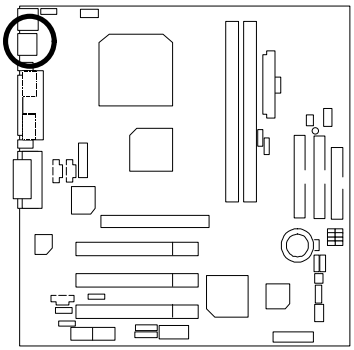
PS/2 Keyboard & PS/2 Mouse Port

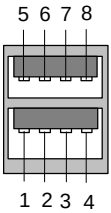




PS/2 Mouse/Keyboard	
Pin No.	Definition
1	Data
2	NC
3	GND
4	VCC(+5V)
5	Clock
6	NC

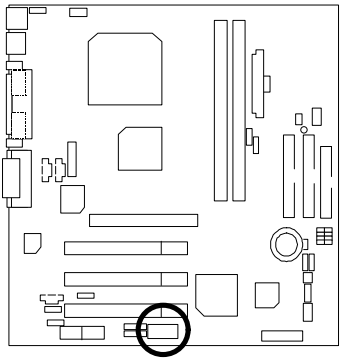
USB 1: Rear USB Port

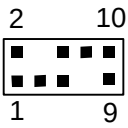




Pin No.	Definition
1	USB V0
2	USB D0-
3	USB D0+
4	GND
5	USB V1
6	USB D1-
7	USB D1+
8	GND

USB 2: Front USB Connector

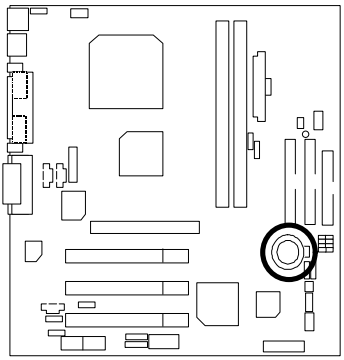




Pin No.	Definition
1	+5V
2	GND
3	USB D2-
4	NC
5	USB D2+
6	USB D3+
7	NC
8	USB D3-
9	GND
10	+5V

Panel And Jumper Definition

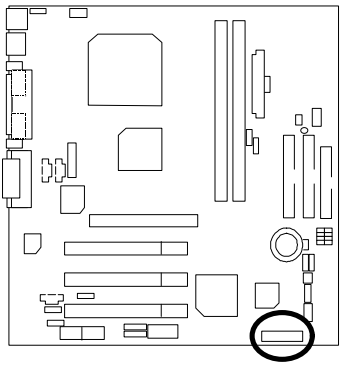
BAT1: Battery

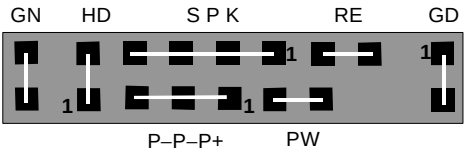


CAUTION

- ☞ Danger of explosion if battery is incorrectly replaced.
- ☞ Replace only with the same or equivalent type recommended by the manufacturer.
- ☞ Dispose of used batteries according to the manufacturer's instructions.

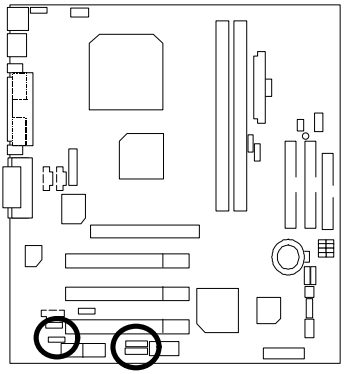
J11: 2x11 Pins Front Panel

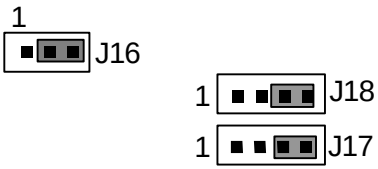




GN (Green Switch)	Open: Normal Operation Close: Entering Green Mode
GD (Green LED)	Pin 1: LED anode(+) Pin 2: LED cathode(–)
HD (IDE Hard Disk Active LED)	Pin 1: LED anode(+) Pin 2: LED cathode(–)
SPK (Speaker Connector)	Pin 1: VCC(+) Pin 2- Pin 3: NC Pin 4: Data(–)
RE (Reset Switch)	Open: Normal Operation Close: Reset Hardware System
P+P–P–(Power LED)	Pin 1: LED anode(+) Pin 2: LED cathode(–) Pin 3: LED cathode(–)
PW (Soft Power Connector)	Open: Normal Operation Close: Power On/Off

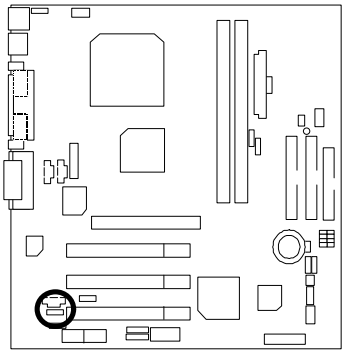
J16 /J17/J18: AMR (Primary or Secondary) Select [Optional]
(AMR→ Audio Modem Riser)





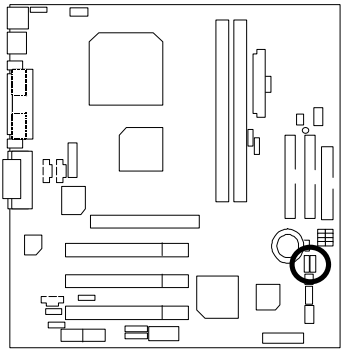
	J16	J17	J18
Onboard AC97	1-2	1-2	1-2
AMR (Primary) (Default)	2-3	3-4	3-4
Onboard AC97 MR (Secondary)	1-2	1-2 3-4	1-2

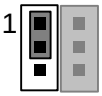
JP1: Front MIC Function



Pin No.	Definition
1-2 close	Enable Front MIC Function
2-3 close	Disable Front MIC Function

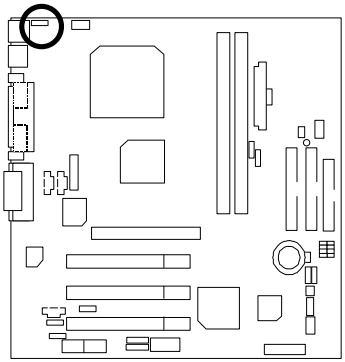
JP3: Clear CMOS Function (Optional)





Pin No.	Definition
1-2 close	Normal (Default)
2-3 close	Clear CMOS

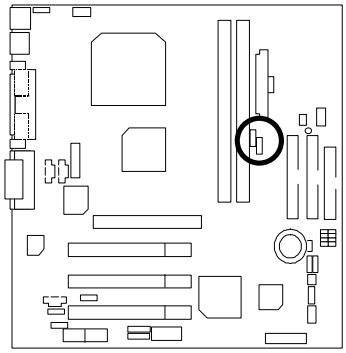
JP4: USB Device Wake up Selection

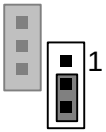


Pin No.	Definition
1-2 close	Normal (Default)
2-3 close	USB Device Wake up

(If you want to use "**USB Dev Wakeup from S3~S5**" function, you have to set the BIOS setting "USB Dev Wakeup from S3~S5" enabled, and the jumper "**JP4**" enabled)
*(Power on the computer and as soon as memory counting starts, press <Del>. You will enter BIOS Setup. Select the item "**POWER MANAGEMENT SETUP**", then select "**USB Dev Wakeup from S3~S5**". Remember to save the setting by pressing "ESC" and choose the "SAVE & EXIT SETUP" option.)

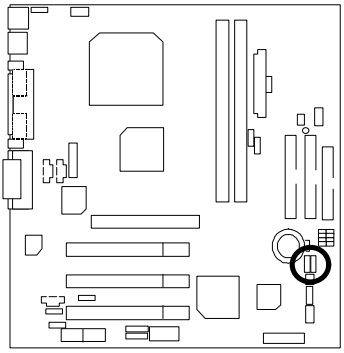
JP7: STR Function Enable

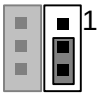




Pin No.	Definition
1-2 close	STR Enable
2-3 close	Normal (Default)

JP9: BIOS Write Protect Function

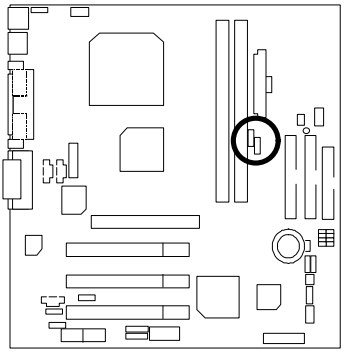


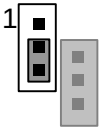


Pin No.	Definition
1-2 close	Write Protect Enable
2-3 close	Write Protect Disable (Default)

Please set Jumper JP9 to "2-3 close" to enabled BIOS write function when you update new BIOS or new device.

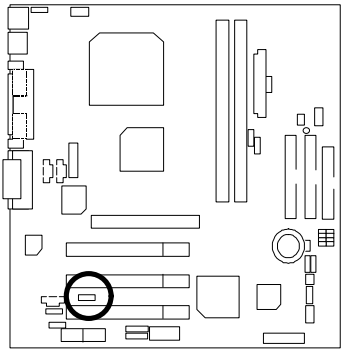
JP10: CPU Clock Frequency (Optional)





Pin No.	Definition
1-2 close	133MHz
2-3 close	100MHz (Default)

JP11: Onboard Sound Function Selection



Pin No.	Definition
1-2 close	Onboard Sound Enable (Default)
2-3 close	Onboard Sound Disable

Performance List

The following performance data list is the testing results of some popular benchmark testing programs.

These data are just referred by users, and there is no responsibility for different testing data values gotten by users. (The different Hardware & Software configuration will result in different benchmark testing results.)

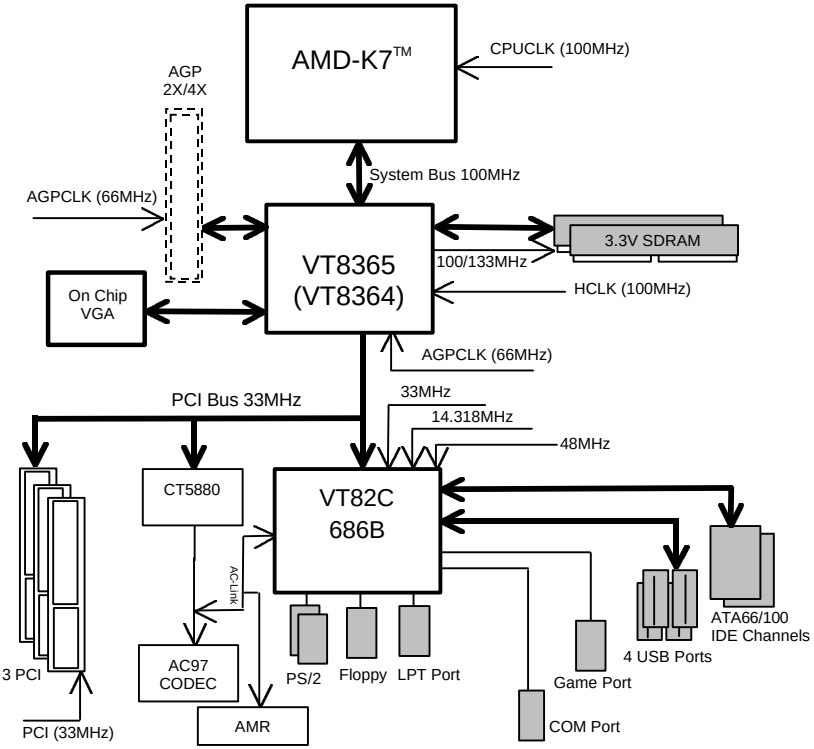
- CPU AMD K7 Athlon™ 1100MHz processor
- DRAM (128x2) MB SDRAM (MICRON MT48LC8M8A2-8E B)
- CACHE SIZE 256KB included in CPU
- DISPLAY Gigabyte GF2000
- STORAGE Onboard IDE (IBM DTLA-307045)
- O.S. Windows NT™ 4.0 SP6a
- DRIVER Display Driver at 1024 x 768 x 16bit colors x 75Hz.

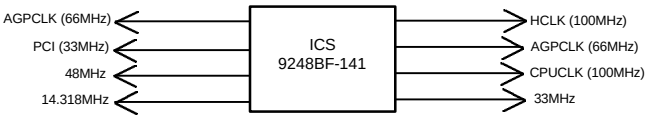
Processor	AMD Athlon™ 1100MHz (100x11)
Winbench99	
CPU mark 99	99.6
FPU Winmark 99	6040
Business Disk Winmark 99	8600
Hi-End Disk Winmark 99	20900
Business Graphics Winmark 99	551
Hi-End Graphics Winmark 99	1100
Winstone99	
Business Winstone 99	52.6
Hi-End Winstone 99	66.4

- CPU AMD K7 Athlon™ 1100MHz processor
- DRAM (128x2) MB SDRAM (KINGMAX KSV884T4A1A)
- CACHE SIZE 256KB included in CPU
- DISPLAY VIA OnChip Display
- STORAGE Onboard IDE (IBM DTLA-307045)
- O.S. Windows NT™ 4.0 SP6a
- DRIVER Display Driver at 1024 x 768 x 16bit colors x 75Hz.

Processor	AMD Athlon™ 1100MHz (100x11)
Winbench99	
CPU mark 99	94.3
FPU Winmark 99	6050
Business Disk Winmark 99	9100
Hi-End Disk Winmark 99	22600
Business Graphics Winmark 99	241
Hi-End Graphics Winmark 99	738
Winstone99	
Business Winstone 99	46.5
Hi-End Winstone 99	61.7

Block Diagram





Suspend To RAM Installation

A.1 Introduce STR function:

Suspend-to-RAM (STR) is a Windows 98 ACPI sleep mode function. When recovering from STR (S3) sleep mode, the system is able, in just a few seconds, to retrieve the last "state" of the system before it went to sleep and recover to that state. The "state" is stored in memory (RAM) before the system goes to sleep. During STR sleep mode, your system uses only enough energy to maintain critical information and system functions, primarily the system state and the ability to recognize various "wake up" triggers or signals, respectively.

A.2 STR function Installation

Please use the following steps to complete the STR function installation.

Step-By-Step Setup

Step 1:

To utilize the STR function, the system must be in Windows 98 ACPI mode.

Putting Windows 98 into ACPI mode is fairly easy.

Setup with Windows 98 CD:

A. Insert the Windows 98 CD into your CD-ROM drive, select Start, and then Run.

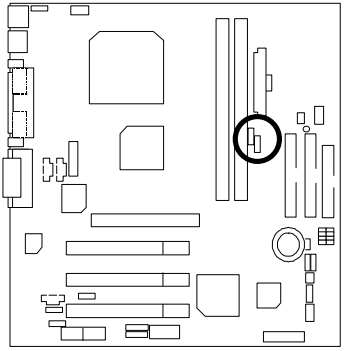
B. Type (without quotes) **"D:\setup"** in the window provided. Hit the enter key or click OK.

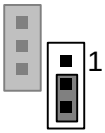
C. After setup completes, remove the CD, and reboot your system

(This manual assumes that your CD-ROM device drive letter is D:).

Step 2:

(If you want to use STR Function, please set jumper JP7 Closed.)





Pin No.	Definition
1-2 close	STR Enable
2-3 close	Normal (Default)

Step 3:

Power on the computer and as soon as memory counting starts, press <Del>. You will enter BIOS Setup. Select the item **"POWER MANAGEMENT SETUP",** then select **"ACPI Sleep Type : S3 / STR"**. Remember to save the settings by pressing "ESC" and choose the **"SAVE & EXIT SETUP"** option.

Congratulation! You have completed the installation and now can use the STR function.

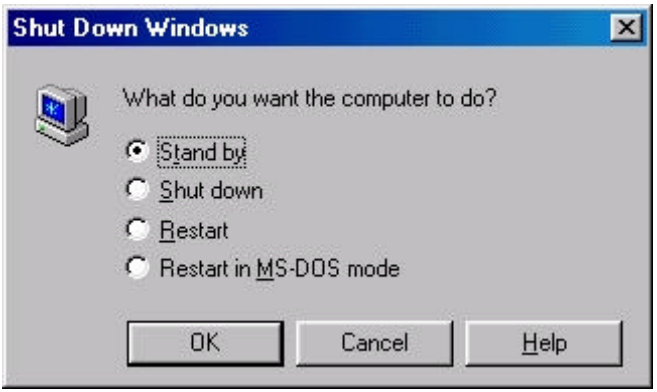
A.3 How to put your system into STR mode?

There are two ways to accomplish this:

1. Choose the "Stand by" item in the "Shut Down Windows" area.

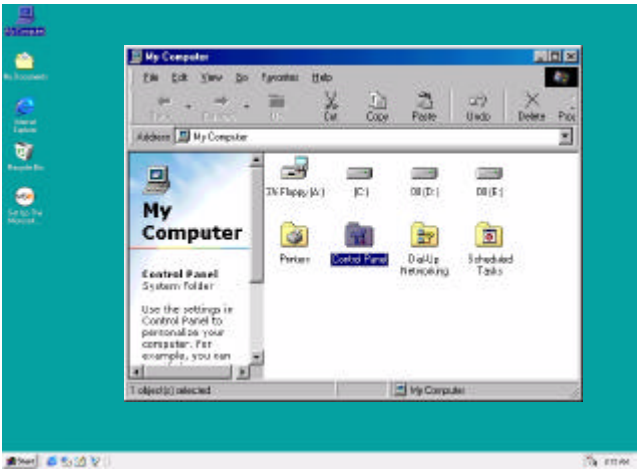
   A. Press the "Start" button and then select "Shut Down"

   B. Choose the "Stand by" item and press "OK"

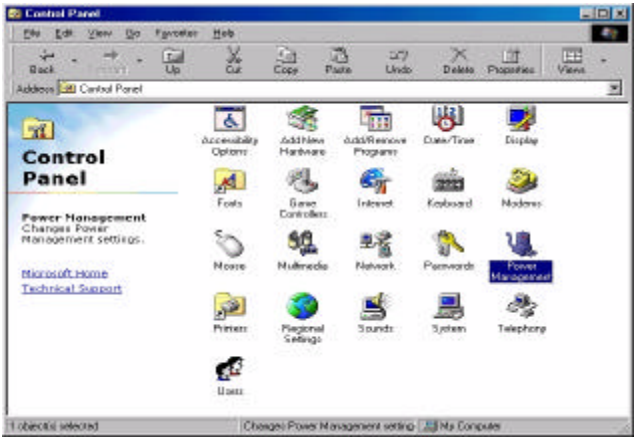


2. Define the system "power on" button to initiate STR sleep mode:

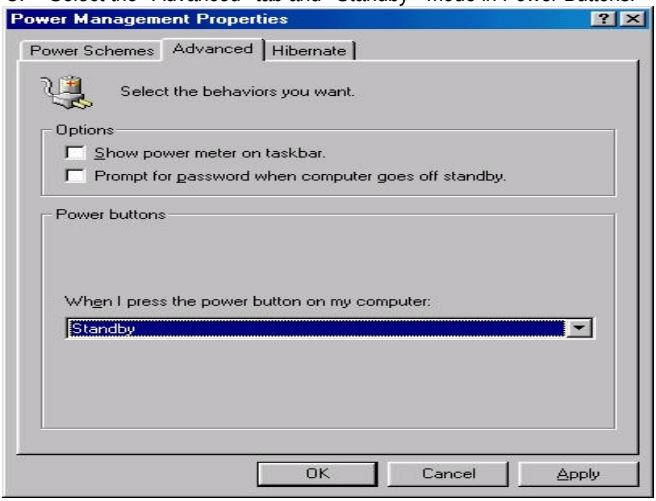
A. Double click "My Computer" and then "Control Panel"



B. Double click the " Power Management" item.



C. Select the "Advanced" tab and "Standby" mode in Power Buttons.



D: Restart your computer to complete setup.

Now when you want to enter STR sleep mode, just momentarily press the "Power on" button.

A.4 How to recover from the STR sleep mode?

There are five ways to "wake up" the system:

1. Press the "Power On" button.
2. Use the "Resume by Alarm" function.
3. Use the "Modem Ring On" function.
4. Use the "Wake On LAN" function.
5. Use the "USB Device Wake up" function

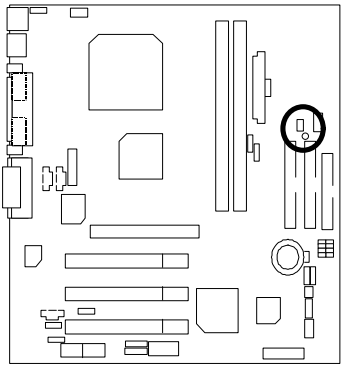
A.5 Notices:

1. In order for STR to function properly, several hardware and software requirements must be satisfied:

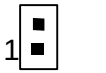
   A. Your ATX power supply must comply with the ATX 2.01 specification (provide more than 720 mA 5V Stand-By current).

   B. Your SDRAM must be PC-100 compliant.

2. Jumper JP8 is provided to connect to the STR LED in your system chassis. [Your chassis may not provide this feature.] The STR LED will be illuminated when your system is in STR sleep mode.



STR LED Connector External.



DIMM LED

Four Speaker & SPDIF Introduction

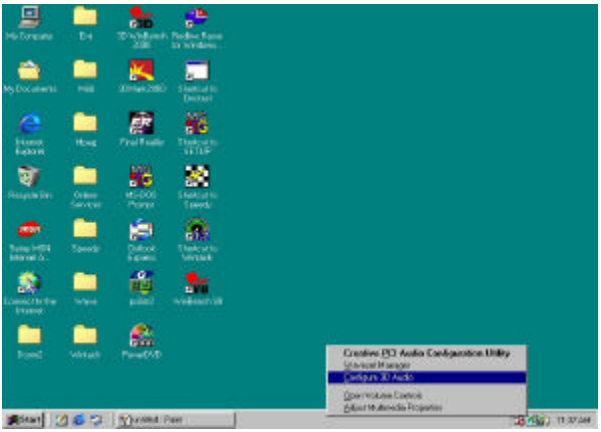
Four Speaker Introduction

A. What is Four Speaker?

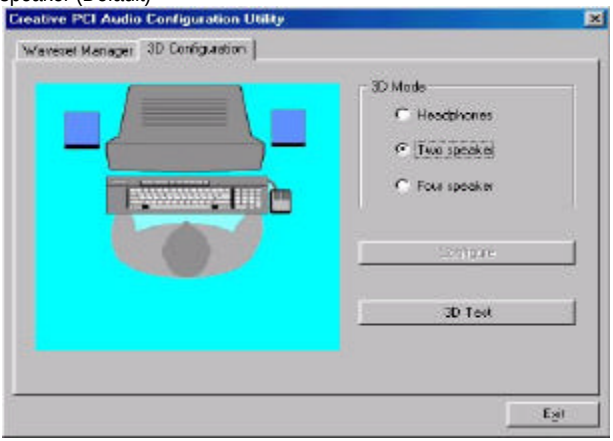
The Creative CT5880 audio chip can support up to 4 speaker output. If you select "Four speaker out", Line In will be reconfigured as another line out to support a second pair of speakers.

B. How to use Four Speaker?

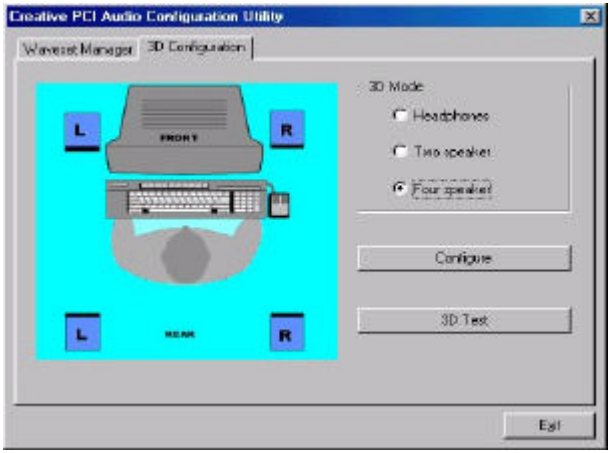
a. Press the audio icon and then select "Configuration 3D Audio"



b. Two speaker (Default)



c. Click “Four speaker” item.



C. Four Speaker Application

The four speaker function will only be supported in application softwares that use Microsoft DirectX and Creative EAX, for example, the game titles, software DVD player and MP3 player.

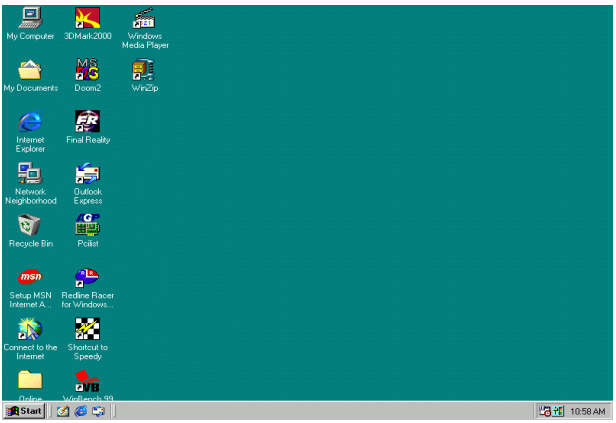
SPDIF Introduction

A. What is SPDIF?

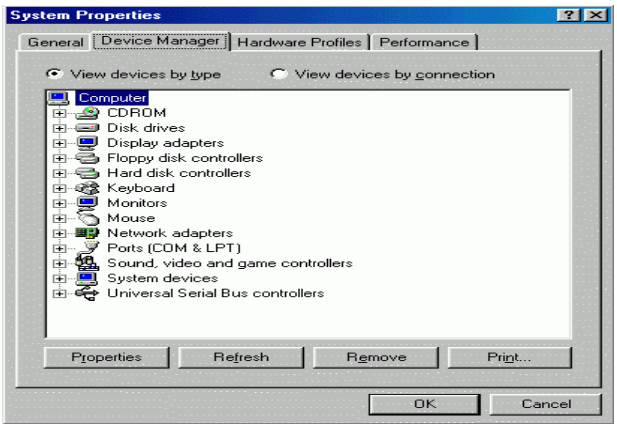
The SPDIF output is capable of providing digital audio to external speakers or compressed AC3 data to an external Dolby digital decoder.

B. How to use SPDIF?

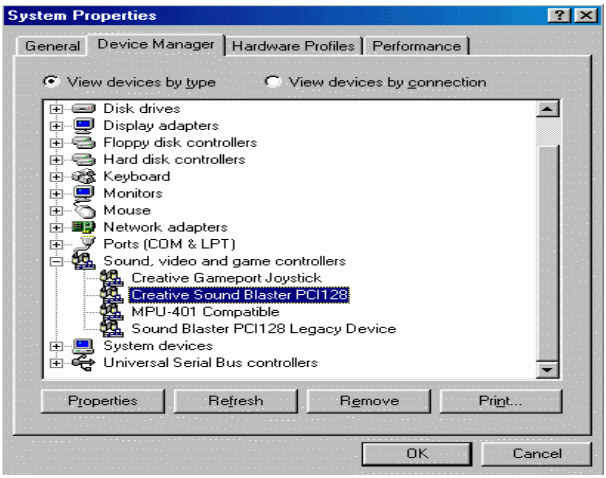
a. Press your mouse right button in "My Computer" and then select the "Properties" item.



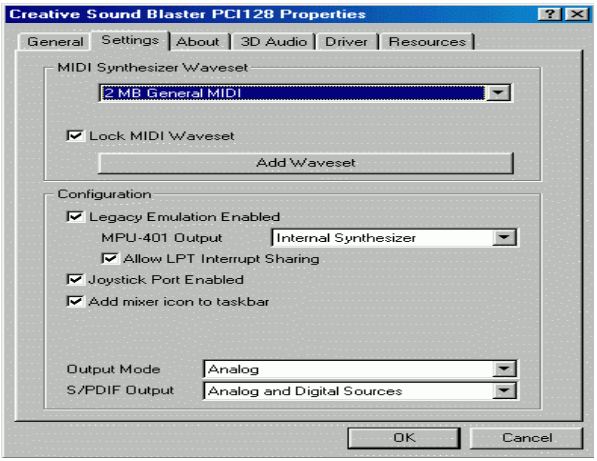
b. Click "Device Manager" item.



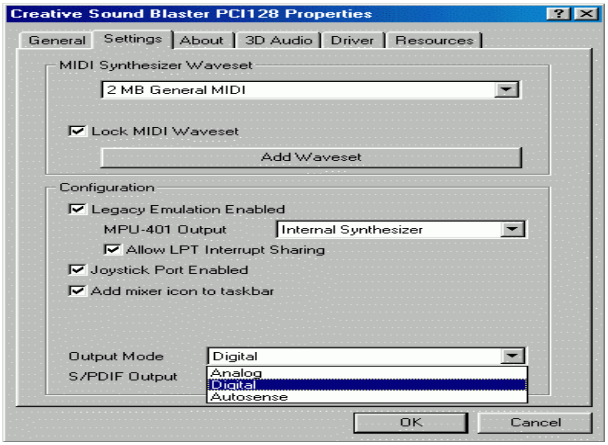
c. Press "Sound, video and game controllers" item and then select the "Creative Sound Blaster PCI128" item.



d. Press "Settings" item and then select the "Output Mode" item.



e. Click "Digital" item, Line Out will be reconfigure to SPDIF Out.



f. Recommend you to select "Autosense", It will automatically detect the type (mono or stereo) of the audio connector that you plug into Line Out audio jack, then configure Line Out to either SPDIF or Speaker accordingly.

@BIOS™ Introduction

Gigabyte announces @ BIOS™ Windows BIOS live update utility

Have you ever updated BIOS by yourself? Or like many other people, you just know what BIOS is, but always hesitate to update it? Because you think updating newest BIOS is unnecessary and actually you don't know how to update it.

Maybe not like others, you are very experienced in BIOS updating and spend quite a lot of time to do it. But of course you don't like to do it too much. First, download different BIOS from website and then switch the operating system to DOS mode. Secondly, use different flash utility to update BIOS. The above process is not a interesting job. Besides, always be carefully to store the BIOS source code correctly in your disks as if you update the wrong BIOS, it will be a nightmare.

Certainly, you wonder why motherboard vendors could not just do something right to save your time and effort and save you from the lousy BIOS updating work? Here it comes! Now Gigabyte announces @BIOS™--the first Windows BIOS live update utility. This is a smart BIOS update software. It could help you to download the BIOS from internet and update it. Not like the other BIOS update software, it's a Windows utility. With the help of "@BIOS™", BIOS updating is no more than a click.

Besides, no matter which mainboard you are using, if it's a Gigabyte's product*, @BIOS™ help you to maintain the BIOS. This utility could detect your correct mainboard model and help you to choose the BIOS accordingly. It then downloads the BIOS from the nearest Gigabyte ftp site automatically. There are several different choices; you could use "Internet Update" to download and update your BIOS directly. Or you may want to keep a backup for your current BIOS, just choose "Save Current BIOS" to save it first. You make a wise choice to use Gigabyte, and @BIOS™ update your BIOS smartly. You are now worry free from updating wrong BIOS, and capable to maintain and manage your BIOS easily. Again, Gigabyte's innovative product erects a milestone in mainboard industries.

For such a wonderful software, how much it costs? Impossible! It's free! Now, if you buy a Gigabyte's motherboard, you could find this amazing software in the attached driver CD. But please remember, connected to internet at first, then you could have a internet BIOS update from your Gigabyte @BIOS™.

EasyTuneIII™ Introduction

Gigabyte announces *EasyTune*III™ Windows overdrive utility

"Overdrive" might be one of the most common issues in computer field. But have many users ever tried it? The answer is probably "no". Because "overdrive" is thought to be very difficult and includes a lot of technical know-how, sometimes "overdrive" is even considered as special skills found only in some enthusiasts.

But as to the experts in "overdrive", what's the truth? They may spend quite a lot of time and money to study, try and use many different hardware and software tools to do "overdrive". And even with these technologies, they still learn that it's quite a risk because the safety and stability of an "overdrive" system is unknown.

Now everything is different because of a Windows overdrive utility EasyTuneIII™--announced by Gigabyte. This utility has totally changed the gaming rule of "overdrive". This is the first overdrive utility suitable for both normal and power users. Users can choose either "Easy Mode" or "Advanced Mode" to run "overdrive" at their convenience. For users who choose "Easy Mode", they just need to click "Auto Optimize" to have auto and immediate CPU overclocking. This software will then overdrive CPU speed automatically with the result being shown in the control panel. If someone prefers to "overdrive" by oneself, there is also another choice. Click "Advanced Mode" to enjoy "sport drive" class overclocking. In "Advanced Mode", one can change the system bus speed in small increments to get ultimate system performance. And no matter which mainboard is used, if it's a Gigabyte's product*, EasyTuneIII™ helps to perform the best of system.

Besides, different from other traditional over-clocking methods, EasyTuneIII™ doesn't require users to change neither BIOS nor hardware switch/ jumper setting; on the other hand, they can do "overdrive" at only one click. Therefore, this is a safer way for "overdrive" as nothing is changed on software or hardware. If user runs EasyTuneIII™ over system's limitation, the biggest lost is only to restart the computer again and the side effect is then well controlled. Moreover, if one well-performed system speed been tested in EasyTuneIII™, user can "Save" this bus speed and "Load" it in next time. Obviously, Gigabyte EasyTuneIII™ has already turned the "overdrive" technology toward to a newer generation.

This wonderful software is now free bundled in Gigabyte motherboard attached driver CD. Users may make a test drive of "EasyTuneIII™" to find out more amazing features by themselves.

For further technical information, please link to: http://www.gigabyte.com.tw

※ **Note: If your CD version is 1.6 or below, please visit our website and download the latest EasyTuneIII™ version.**

Memory Installation

The motherboard has 2 dual inline memory module (DIMM) sockets. The BIOS will automatically detects memory type and size. To install the memory module, just push it vertically into the DIMM Slot .The DIMM module can only fit in one direction due to the two notch. Memory size can vary between sockets.

Install memory in any combination table:

DIMM	168-pin SDRAM DIMM Modules	
DIMM 1	Supports 16 / 32 / 64 / 128 / 256 / 512 MB	X 1 pcs
DIMM 2	Supports 16 / 32 / 64 / 128 / 256 / 512 MB	X 1 pcs

¡ Total System Memory (Max 1.0GB)

Page Index for BIOS Setup	Page
The Main Menu	P.43
Standard CMOS Setup	P.45
BIOS Features Setup	P.48
Chipset Features Setup	P.50
Power Management Setup	P.52
PNP/ PCI Configuration	P.55
Load BIOS Defaults	P.56
Load Setup Defaults	P.57
Integrated Peripherals	P.58
Hardware Monitor	P.60
Supervisor Password / User Password	P.61
IDE HDD Auto Detection	P.62
Save & Exit Setup	P.63
Exit Without Saving	P.64

BIOS Setup

BIOS Setup is an overview of the BIOS Setup Program. The program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

ENTERING SETUP

Power ON the computer and press <Del> immediately will allow you to enter Setup. If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" bottom on the system case. You may also restart by simultaneously press <Ctrl> – <Alt>– <Del> keys.

CONTROL KEYS

<↑>	Move to previous item
<↓>	Move to next item
<←>	Move to the item in the left hand
<→>	Move to the item in the right hand
<Esc>	Main Menu - Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu
<+/PgUp>	Increase the numeric value or make changes
<-/PgDn>	Decrease the numeric value or make changes
<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F2>	Reserved
<F3>	Reserved
<F4>	Reserved
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F6>	Load the default CMOS value from BIOS default table, only for Option Page Setup Menu
<F7>	Load the Setup Defaults
<F8>	Reserved
<F9>	Reserved
<F10>	Save all the CMOS changes, only for Main Menu

GETTING HELP

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu / Option Page Setup Menu

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc>.

The Main Menu

Once you enter AMI BIOS CMOS Setup Utility, the Main Menu (Figure 1) will appear on the screen. The Main Menu allows you to select from nine setup functions and two exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24a (C) 1999 American Megatrends, Inc. All Rights Reserved	
STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	HARDWARE MONITOR SETUP
CHIPSET FEATURES SETUP	SUPERVISOR PASSWORD
POWER MANAGEMENT SETUP	USER PASSWORD
PNP/PCI CONFIGURATION	IDE HDD AUTO DETECTION
LOAD BIOS DEFAULTS	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING
ESC : Quit ↑↓←→ : Select Item (Shift) F2 : Change Color F5 : Old Values F6 : Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit	
Time, Date, Hard Disk Type, …	

Figure 1: Main Menu

- **Standard CMOS Setup**

  This setup page includes all the items in standard compatible BIOS.

- **BIOS Features Setup**

  This setup page includes all the items of AMI special enhanced features.

- **Chipset Features Setup**

  This setup page includes all the items of chipset special features.

- **Power Management Setup**

  This setup page includes all the items of Green function features.

- **PnP/PCI Configurations**

  This setup page includes all the configurations of PCI & PnP ISA resources.

- **Load BIOS Defaults**

  Bios Defaults indicates the value of the system parameter which the system would be in the safe configuration.

- **Load Setup Defaults**

  Setup Defaults indicates the value of the system parameter which the system would be in the most appropriate configuration.

- **Integrated Peripherals**

  This setup page includes all onboard peripherals.

- **Hardware Monitor Setup**

  This setup page is auto detect fan and temperature status.

- **Supervisor password**

  Change, set, or disable password. It allows you to limit access to the system and Setup, or just to Setup.

- **User password**

  Change, set, or disable password. It allows you to limit access to the system.

- **IDE HDD auto detection**

  Automatically configure hard disk parameters.

- **Save & Exit Setup**

  Save CMOS value settings to CMOS and exit setup.

- **Exit Without Saving**

  Abandon all CMOS value changes and exit setup.

Standard CMOS Setup

The items in Standard CMOS Features Menu (Figure 2) are divided into 9 categories. Each category includes no, one or more than one setup items. Use the arrows to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

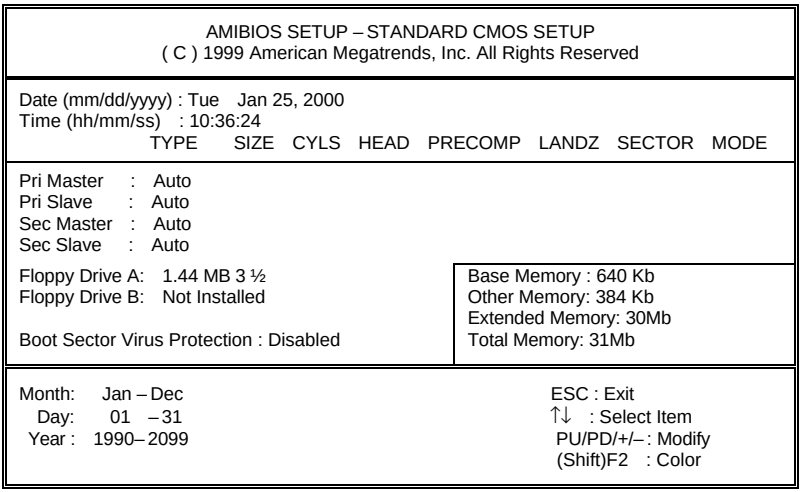

AMIBIOS SETUP – STANDARD CMOS SETUP
(C) 1999 American Megatrends, Inc. All Rights Reserved
Date (mm/dd/yyyy) : Tue Jan 25, 2000
Time (hh/mm/ss) : 10:36:24
TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE
Pri Master : Auto
Pri Slave : Auto
Sec Master : Auto
Sec Slave : Auto
Floppy Drive A: 1.44 MB 3 ½
Floppy Drive B: Not Installed
Boot Sector Virus Protection : Disabled
Base Memory : 640 Kb
Other Memory: 384 Kb
Extended Memory: 30Mb
Total Memory: 31Mb
Month: Jan – Dec
Day: 01 – 31
Year : 1990– 2099
ESC : Exit
↑↓ : Select Item
PU/PD/+/– : Modify
(Shift)F2 : Color

Figure 2: Standard CMOS Setup

- **Date**

The date format is <Week> <Month> <Day>, <Year>.

Week	The week, from Sun to Sat, determined by the BIOS and is display-only
Month	The month, Jan. Through Dec.
Day	The day, from 1 to 31 (or the maximum allowed in the month)
Year	The year, from 1990 through 2099

- **Time**

  The times format in <hour> <minute> <second>. The time is calculated base on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

- **Primary Master, Slave / Secondary Master, Slave**

  The category identifies the types of hard disk from drive C to F that has been installed in the computer. There are two types: auto type, and user definable type. User type is user-definable; Auto type which will automatically detect HDD type.

  Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category.

  If you select User Type, related information will be asked to enter to the following items. Enter the information directly from the keyboard and press <Enter>. Such information should be provided in the documentation form your hard disk vendor or the system manufacturer.

CYLS.	Number of cylinders
HEADS	number of heads
PRECOMP	write precomp
LANDZONE	Landing zone
SECTORS	number of sectors

If a hard disk has not been installed select NONE and press <Enter>.

- **Floppy Drive A / Drive B**

  The category identifies the types of floppy disk drive A or drive B that has been installed in the computer.

None	No floppy drive installed
360K, 5.25 in.	5.25 inch PC-type standard drive; 360K byte capacity.
1.2M, 5.25 in.	5.25 inch AT-type high-density drive; 1.2M byte capacity (3.5 inch when 3 Mode is Enabled).
720K, 3.5 in.	3.5 inch double-sided drive; 720K byte capacity
1.44M, 3.5 in.	3.5 inch double-sided drive; 1.44M byte capacity.
2.88M, 3.5 in.	3.5 inch double-sided drive; 2.88M byte capacity.

- **Boot Sector Virus Protection**

  If it is set to enable, the category will flash on the screen when there is any attempt to write to the boot sector or partition table of the hard disk drive. The system will halt and the following error message will appear in the mean time. You can run anti-virus program to locate the problem.

Enabled	Activate automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table
Disabled	No warning message to appear when anything attempts to access the boot sector or hard disk partition table. **(Default Value)**

- **Memory**

  The category is display-only which is determined by POST (Power On Self Test) of the BIOS.

  Base Memory

  The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.

  The value of the base memory is typically 512 K for systems with 512 K memory installed on the motherboard, or 640 K for systems with 640 K or more memory installed on the motherboard.

  Extended Memory

  The BIOS determines how much extended memory is present during the POST.

  This is the amount of memory located above 1 MB in the CPU's memory address map.

  Other Memory

  This refers to the memory located in the 640 K to 1024 K address space. This is memory that can be used for different applications.

  DOS uses this area to load device drivers to keep as much base memory free for application programs. Most use for this area is Shadow RAM

BIOS Features Setup

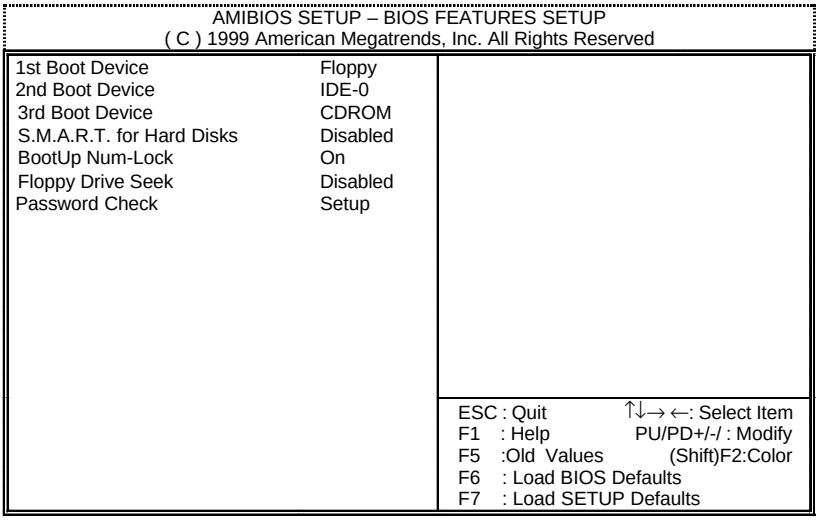

AMIBIOS SETUP – BIOS FEATURES SETUP
(C) 1999 American Megatrends, Inc. All Rights Reserved
1st Boot Device Floppy
2nd Boot Device IDE-0
3rd Boot Device CDROM
S.M.A.R.T. for Hard Disks Disabled
BootUp Num-Lock On
Floppy Drive Seek Disabled
Password Check Setup
ESC : Quit
↑↓→ ←: Select Item
F1 : Help
PU/PD+/-/ : Modify
F5 :Old Values
(Shift)F2:Color
F6 : Load BIOS Defaults
F7 : Load SETUP Defaults

Figure 3: BIOS Features Setup

- **1st / 2nd / 3rd Boot Device**

Floppy	Boot Device by Floppy.
ZIP A: / LS120	Boot Device by ZIP A: / LS120.
CDROM	Boot Device by CDROM.
SCSI	Boot Device by SCSI.
NETWORK	Boot Device by NETWORK.
USB FDD	Boot Device by USB FDD.
IDE-0~IDE-3	Boot Device by IDE-0~IDE-3.
Disabled	Boot Device by Disabled.
ATAPI ZIP C:	Boot Device by ATAPI ZIP C:.

- **S.M.A.R.T. for Hard Disks**

Enabled	Enable S.M.A.R.T. Hard for Disks.
Disabled	Disable S.M.A.R.T. Hard for Disks. **(Default Value)**

- **Boot Up Num-Lock**

On	Keypad is number keys. **(Default Value)**
Off	Keypad is arrow keys.

- **Floppy Drive Seek**

During POST, BIOS will determine if the floppy disk drive installed is 40 or 80 tracks. 360 type is 40 tracks while 720 , 1.2 and 1.44 are all 80 tracks.

Enabled	BIOS searches for floppy disk drive to determine if it is 40 or 80 tracks. Note that BIOS can not tell from 720, 1.2 or 1.44 drive type as they are all 80 tracks.
Disabled	BIOS will not search for the type of floppy disk drive by track number. Note that there will not be any warning message if the drive installed is 360. **(Default Value)**

- **Password Check**

Setup	Set Password Check to Setup. **(Default Value)**
Always	Set Password Check to Always.

Chipset Features Setup

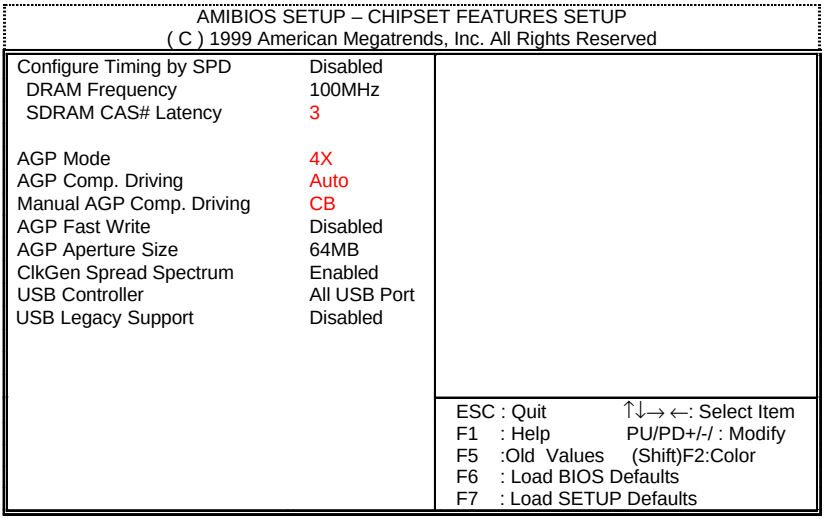

AMIBIOS SETUP – CHIPSET FEATURES SETUP
(C) 1999 American Megatrends, Inc. All Rights Reserved
Configure Timing by SPD Disabled
DRAM Frequency 100MHz
SDRAM CAS# Latency 3
AGP Mode 4X
AGP Comp. Driving Auto
Manual AGP Comp. Driving CB
AGP Fast Write Disabled
AGP Aperture Size 64MB
ClkGen Spread Spectrum Enabled
USB Controller All USB Port
USB Legacy Support Disabled
ESC : Quit ↑↓→ ←: Select Item
F1 : Help PU/PD+/-/ : Modify
F5 :Old Values (Shift)F2:Color
F6 : Load BIOS Defaults
F7 : Load SETUP Defaults

Figure 4: Chipset Features Setup

- **Configure Time by SPD**

Disabled	Disable Configure Time by SPD function. **(Default Value)**
Enabled	Enable Configure Time by SPD function.

- **DRAM Frequency**

100MHz	Set DRAM Frequency to 100MHz. **(Default Value)**
133MHz	Set DRAM Frequency to 133MHz.

- **SDRAM CAS# Latency**

2	For Fastest SDRAM DIMM module.
3	For Slower SDRAM DIMM module. **(Default Value)**

- **AGP Mode**

4X	Set AGP Mode to 4X. **(Default Value)**
1X	Set AGP Mode to 1X.
2X	Set AGP Mode to 2X.

· **AGP Comp. Driving**

Auto	Set AGP Comp. Driving to Auto. **(Default Value)**
Manual	Set AGP Comp. Driving to Manual.

If AGP Comp. Driving is Manual.

Manual AGP Comp. Driving:	00~FF

· **AGP Fast Write**

Enabled	Enable AGP Fast Write function.
Disabled	Disable this function. **(Default Value)**

· **AGP Aperture Size**

4MB	Set AGP Aperture Size to 4MB.
8MB	Set AGP Aperture Size to 8 MB.
16MB	Set AGP Aperture Size to 16 MB.
32MB	Set AGP Aperture Size to 32 MB.
64MB	Set AGP Aperture Size to 64 MB. **(Default Value)**
128MB	Set AGP Aperture Size to 128 MB.
256MB	Set AGP Aperture Size to 256 MB.

- **ClkGen Spread Spectrum**

Disabled	Disable ClkGen Spread Spectrum.
Enabled	Enable ClkGen Spread Spectrum. **(Default Value)**

· **USB Controller**

All USB Port	Set USB Controller to All USB Port. **(Default Value)**
Disabled	Disable USB Controller.
USB Port 0&1	Set USB Controller to USB Port 0&1.
USB Port 2&3	Set USB Controller to USB Port 2&3.

· **USB Legacy Support**

Keyboard/FDD	Set USB Legacy Support Keyboard / Floppy.
KB/Mouse/FDD	Set USB Legacy Support Keyboard / Mouse / Floppy.
Disabled	Disable USB Legacy Support Function. **(Default Value)**

Power Management Setup

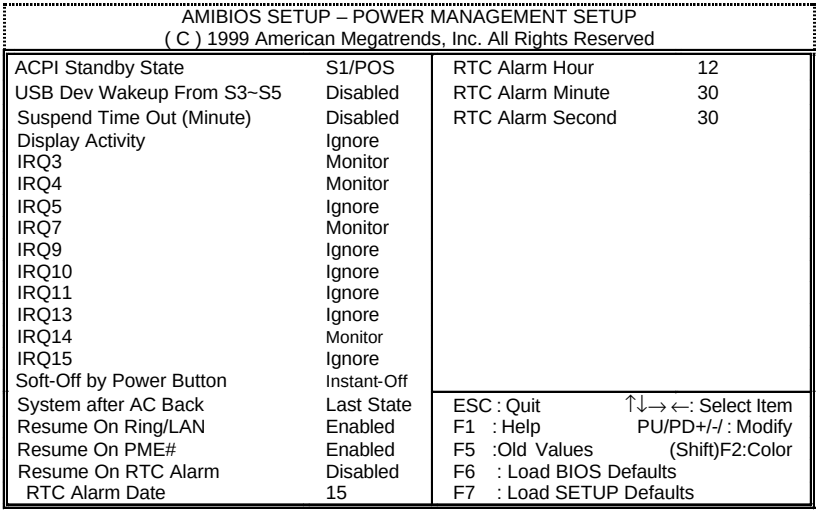


Figure 5: Power Management Setup

- **ACPI Standby State**

S1/POS	Set ACPI Standby State to S1. **(Default Value)**
S3/STR	Set ACPI Standby State to S3.

- **USB Dev Wakeup From S3~S5**

Enabled	Enable USB Dev Wakeup from ACPI S3, S4 and S5 mode.
Disabled	Disable USB Dev Wakeup from ACPI S3, S4 and S5 mode. **(Default Value)**

- **Suspend Time Out (Minute.)**

Disabled	Disable Suspend Time Out Function. **(Default Value)**
1	Enable Suspend Time Out after 1min.
2	Enable Suspend Time Out after 2min.
4	Enable Suspend Time Out after 4min.
8	Enable Suspend Time Out after 8min.
10	Enable Suspend Time Out after 10min.
20	Enable Suspend Time Out after 20min.
30	Enable Suspend Time Out after 30min.

40	Enable Suspend Time Out after 40min.
50	Enable Suspend Time Out after 50min.
60	Enable Suspend Time Out after 60min.

· **Display Activity**

Ignore	Ignore Display Activity. **(Default Value)**
Monitor	Monitor Display Activity.

· **IRQ 3~IRQ15**

Ignore	Ignore IRQ3 ~IRQ15.
Monitor	Monitor IRQ3~IRQ15.

- **Soft-off by Power Button**

Instant-off	Soft switch ON/OFF for POWER ON/OFF. **(Default value)**
Suspend	Soft switch to enter Suspend Mode.

- **System after AC Back**

Last State	System power on depends on the status before AC lost. **(Default Value)**
Off	Always in Off state when AC back.
On	Always power on the system when AC back.

- **Resume On Ring / LAN**

Disabled	Disable Resume On Ring / LAN.
Enabled	Enable Resume On Ring / LAN. **(Default Value)**

- **Resume On PME#**

Disabled	Disable Resume On PME#.
Enabled	Enable Resume On PME#. **(Default Value)**

- **Resume On RTC Alarm**

You can set "Resume On RTC Alarm" item to enabled and key in Data/time to power on system.

Disabled	Disable this function. **(Default Value)**
Enabled	Enable alarm function to POWER ON system.

If the default value is Enabled.

RTC Alarm Date:	Every Day, 1~31
RTC Alarm Hour:	0~23
RTC Alarm Minute:	0~59
RTC Alarm Second:	0~59

PNP/PCI Configurations

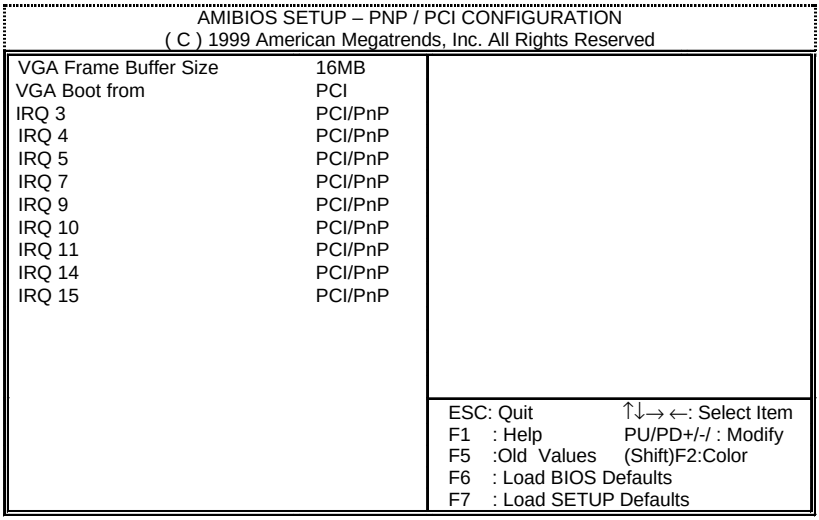


Figure 6: PNP/PCI Configuration

- **VGA Frame Buffer Size**

8MB	Set VGA Frame Buffer Size to 8MB.
16MB	Set VGA Frame Buffer Size to 16MB. **(Default Value)**
32MB	Set VGA Frame Buffer Size to 32MB.

- **VGA Boot From**

AGP	Primary Graphics Adapter From AGP.
PCI	Primary Graphics Adapter From PCI. **(Default Value)**

- **IRQ (3, 4, 5, 7, 9, 10, 11, 14, 15)**

ISA/EISA	The resource is used by Legacy ISA device.
PCI / PnP	The resource is used by PCI/ PnP device. **(Default Value)**

Load BIOS Defaults

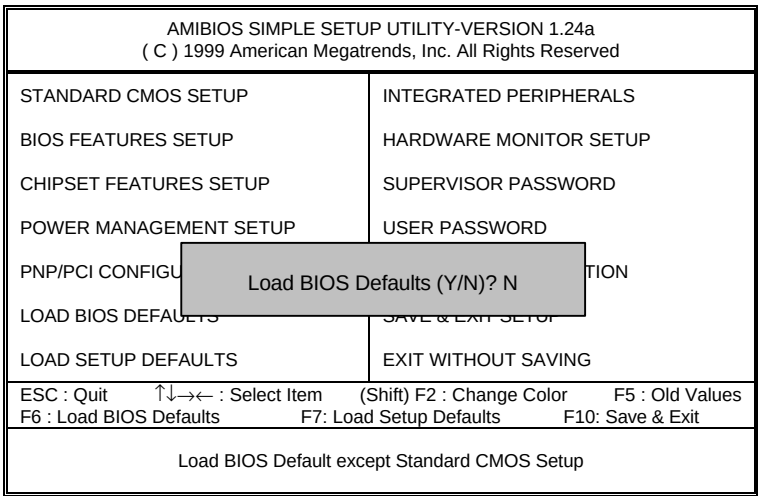

AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24a
(C) 1999 American Megatrends, Inc. All Rights Reserved
STANDARD CMOS SETUP
BIOS FEATURES SETUP
CHIPSET FEATURES SETUP
POWER MANAGEMENT SETUP
PNP/PCI CONFIGU
LOAD BIOS DEFAULTS
LOAD SETUP DEFAULTS
INTEGRATED PERIPHERALS
HARDWARE MONITOR SETUP
SUPERVISOR PASSWORD
USER PASSWORD
TION
EXIT WITHOUT SAVING
Load BIOS Defaults (Y/N)? N
ESC : Quit ↑↓→← : Select Item (Shift) F2 : Change Color F5 : Old Values
F6 : Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit
Load BIOS Default except Standard CMOS Setup

Figure 7: Load BIOS Defaults

- **Load BIOS Defaults**

  BIOS defaults contain the most appropriate values of the system parameters that allow minimum system performance.

Load Setup Defaults

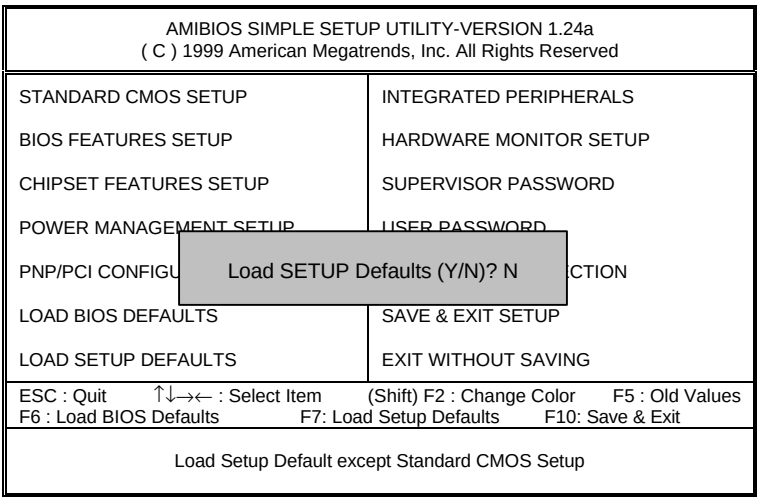

AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24a
(C) 1999 American Megatrends, Inc. All Rights Reserved
STANDARD CMOS SETUP
BIOS FEATURES SETUP
CHIPSET FEATURES SETUP
POWER MANAGEMENT SETUP
PNP/PCI CONFIGU
LOAD BIOS DEFAULTS
LOAD SETUP DEFAULTS
INTEGRATED PERIPHERALS
HARDWARE MONITOR SETUP
SUPERVISOR PASSWORD
USER PASSWORD
CTION
SAVE & EXIT SETUP
EXIT WITHOUT SAVING
Load SETUP Defaults (Y/N)? N
ESC : Quit ↑↓→← : Select Item (Shift) F2 : Change Color F5 : Old Values
F6 : Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit
Load Setup Default except Standard CMOS Setup

Figure 8: Load Setup Defaults

- **Load Setup Defaults**

  Selecting this field loads the factory defaults for BIOS and Chipset Features which the system automatically detects.

Integrated Peripherals

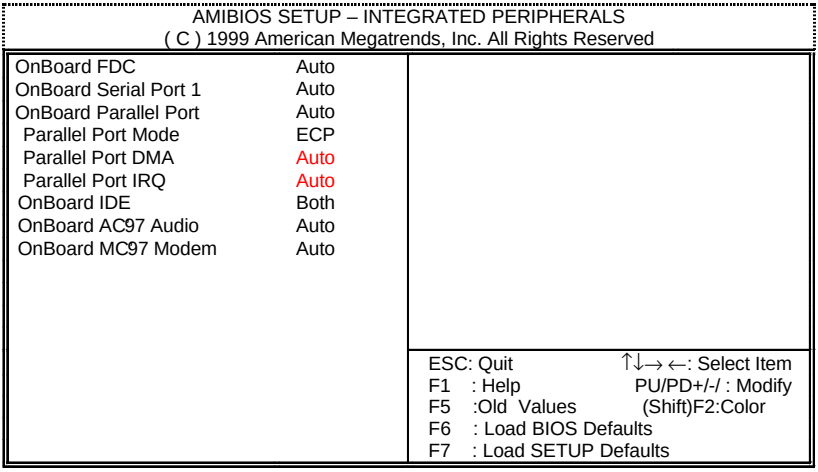

AMIBIOS SETUP – INTEGRATED PERIPHERALS
(C) 1999 American Megatrends, Inc. All Rights Reserved
OnBoard FDC Auto
OnBoard Serial Port 1 Auto
OnBoard Parallel Port Auto
Parallel Port Mode ECP
Parallel Port DMA Auto
Parallel Port IRQ Auto
OnBoard IDE Both
OnBoard AC97 Audio Auto
OnBoard MC97 Modem Auto
ESC: Quit
↑↓→ ←: Select Item
F1 : Help
PU/PD+/-/ : Modify
F5 :Old Values
(Shift)F2:Color
F6 : Load BIOS Defaults
F7 : Load SETUP Defaults

Figure 9: Integrated Peripherals

- **Onboard FDC**

Auto	Auto detect OnBoard Floppy disk controller. **(Default value)**
Enabled	Enable OnBoard Floppy disk controller.
Disabled	Disable OnBoard Floppy disk controller.

- **On Board Serial Port 1**

Auto	BIOS will automatically setup the port 1 address. **(Default Value)**
3F8/COM1	Enable on Board Serial port 1 and address is 3F8.
2F8/COM2	Enable on Board Serial port 1 and address is 2F8.
3E8/COM3	Enable on Board Serial port 1 and address is 3E8.
2E8/COM4	Enable on Board Serial port 1 and address is 2E8.
Disabled	Disable on Board Serial port 1.

- **OnBoard Parallel port**

378	Enable On Board LPT port and address to 378.
278	Enable On Board LPT port and address to 278.
3BC	Enable On Board LPT port and address to 3BC.
Auto	Set On Board LPT port to Auto. **(Default Value)**
Disabled	Disable On Board LPT port.

- **Parallel Port Mode**

EPP	Using Parallel port as Enhanced Parallel Port.
ECP	Using Parallel port as Extended Capabilities Port. **(Default Value)**
Normal	Normal Operation.
EPP+ECP	Using Parallel port as Enhanced Parallel Port & Extended Capabilities Port.

- **Parallel Port DMA**

Auto	Set Auto to parallel port mode DMA Channel. . **(Default Value)**.
3	Set Parallel Port DMA to 3.
1	Set Parallel Port DMA to 1.
0	Set Parallel Port DMA to 0.

- **Parallel Port IRQ**

7	Set Parallel Port IRQ to 7.
Auto	Set Auto to parallel Port IRQ DMA Channel. **(Default Value)**
5	Set Parallel Port IRQ to 5.

- **OnBoard IDE**

Disabled	Disable OnBoard IDE.
Both	Set OnBoard IDE to Both. **(Default Value)**
Primary	Set OnBoard IDE to Primary.
Secondary	Set OnBoard IDE to Secondary.

- **OnBoard AC'97 Audio**

Auto	Auto detect OnBoard AC'97 Audio. **(Default Value)**
Disabled	Disable OnBoard AC'97 Audio.

- **OnBoard MC'97 Modem**

Auto	Auto detect OnBoard MC'97 Modem. **(Default Value)**
Disabled	Disable OnBoard MC'97 Modem.

Hardware Monitor

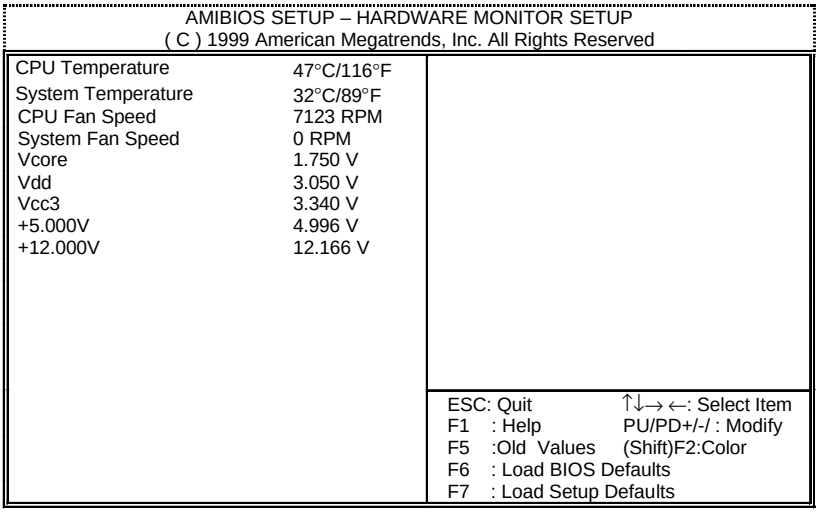


Figure 10: Hardware Monitor

- **CPU Temperature. (°C / °F)**

  Detect CPU Temperature automatically.

- **System Temperature. (°C / °F)**

  Detect System Temperature automatically.

- **CPU Fan Speed**

  Detect CPU Fan speed status automatically.

- **System Fan Speed**

  Detect System Fan speed status automatically.

- **Voltage (V) Vcore / Vdd / Vcc3 / +5V / +12V**

  Detect system's voltage status automatically.

Set Supervisor / User Password

When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

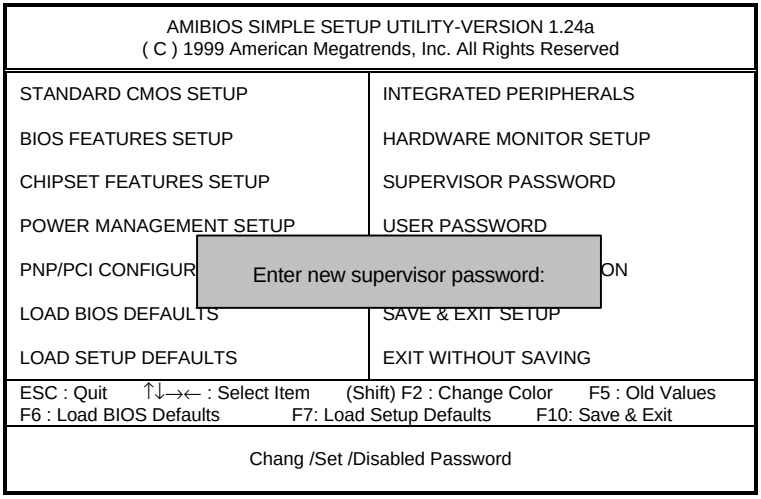

AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24a
(C) 1999 American Megatrends, Inc. All Rights Reserved
STANDARD CMOS SETUP
BIOS FEATURES SETUP
CHIPSET FEATURES SETUP
POWER MANAGEMENT SETUP
PNP/PCI CONFIGUR
LOAD BIOS DEFAULTS
LOAD SETUP DEFAULTS
INTEGRATED PERIPHERALS
HARDWARE MONITOR SETUP
SUPERVISOR PASSWORD
USER PASSWORD
ON
SAVE & EXIT SETUP
EXIT WITHOUT SAVING
Enter new supervisor password:
ESC : Quit ↑↓→← : Select Item (Shift) F2 : Change Color F5 : Old Values
F6 : Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit
Chang /Set /Disabled Password

Figure 11: Password Setting

Type the password, up to six characters, and press <Enter>. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To disable password, just press <Enter> when you are prompted to enter password. A message "**PASSWORD DISABLED**" will appear to confirm the password being disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

The BIOS Setup program allows you to specify two separate passwords: a **SUPERVISOR PASSWORD** and a **USER PASSWORD**. When disabled, anyone may access all BIOS Setup program function. When enabled, the Supervisor password is required for entering the BIOS Setup program and having full configuration fields, the User password is required to access only basic items.

If you select "**Always**" at "**Password Check**" in BIOS Features Setup Menu, you will be prompted for the password every time the system is rebooted or any time you try to enter Setup Menu.

If you select "**Setup**" at "**Password Check**" in BIOS Features Setup Menu, you will be prompted only when you try to enter Setup.

IDE HDD AUTO Detection

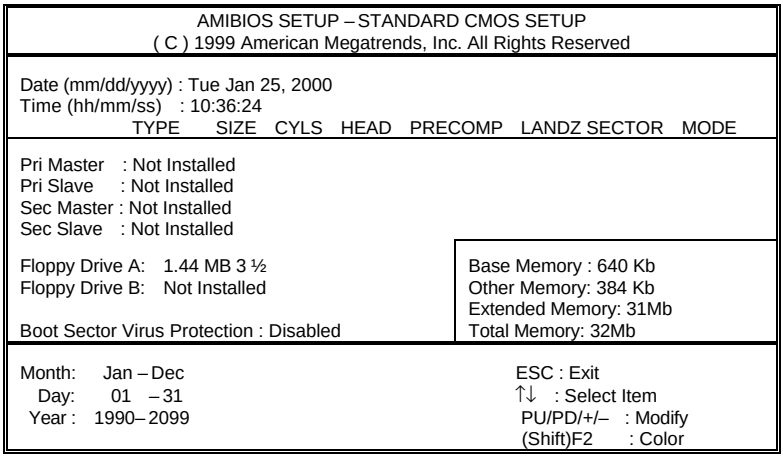

AMIBIOS SETUP – STANDARD CMOS SETUP
(C) 1999 American Megatrends, Inc. All Rights Reserved
Date (mm/dd/yyyy) : Tue Jan 25, 2000
Time (hh/mm/ss) : 10:36:24
TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE
Pri Master : Not Installed
Pri Slave : Not Installed
Sec Master : Not Installed
Sec Slave : Not Installed
Floppy Drive A: 1.44 MB 3 ½
Floppy Drive B: Not Installed
Boot Sector Virus Protection : Disabled
Base Memory : 640 Kb
Other Memory: 384 Kb
Extended Memory: 31Mb
Total Memory: 32Mb
Month: Jan – Dec
Day: 01 – 31
Year : 1990– 2099
ESC : Exit
↑↓ : Select Item
PU/PD/+/– : Modify
(Shift)F2 : Color

Figure 12: IDE HDD Auto Detection

Type "Y" will accept the H.D.D. parameter reported by BIOS.

Type "N" will keep the old H.D.D. parameter setup. If the hard disk cylinder number is over 1024, then the user can select LBA mode or LARGER mode for DOS partition larger than 528 MB.

Save & Exit Setup

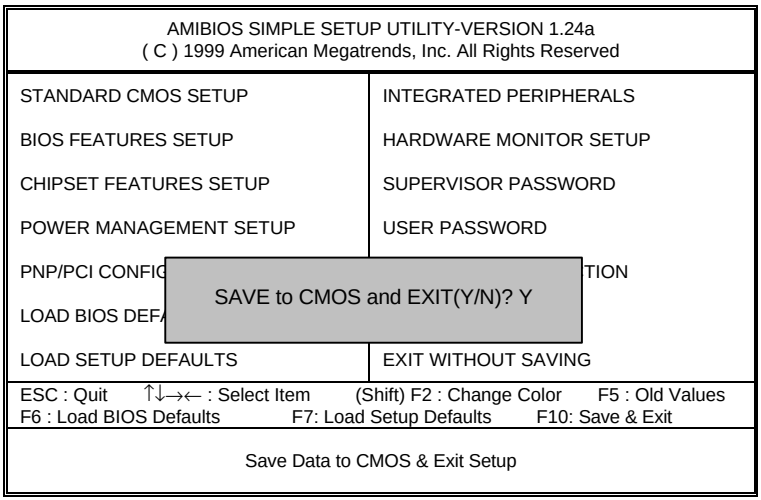

AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24a
(C) 1999 American Megatrends, Inc. All Rights Reserved
STANDARD CMOS SETUP
BIOS FEATURES SETUP
CHIPSET FEATURES SETUP
POWER MANAGEMENT SETUP
PNP/PCI CONFIC
LOAD BIOS DEF/
LOAD SETUP DEFAULTS
INTEGRATED PERIPHERALS
HARDWARE MONITOR SETUP
SUPERVISOR PASSWORD
USER PASSWORD
TION
SAVE to CMOS and EXIT(Y/N)? Y
EXIT WITHOUT SAVING
ESC : Quit ↑↓→← : Select Item (Shift) F2 : Change Color F5 : Old Values
F6 : Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit
Save Data to CMOS & Exit Setup

Figure 13: Save & Exit Setup

Type "Y" will quit the Setup Utility and save the user setup value to RTC CMOS.

Type "N" will return to Setup Utility.

Exit Without Saving

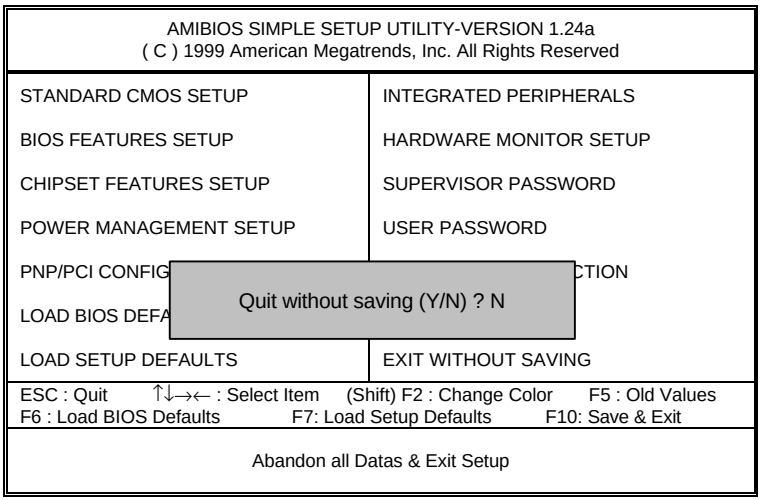

AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24a
(C) 1999 American Megatrends, Inc. All Rights Reserved
STANDARD CMOS SETUP
BIOS FEATURES SETUP
CHIPSET FEATURES SETUP
POWER MANAGEMENT SETUP
PNP/PCI CONFIG
LOAD BIOS DEFA
LOAD SETUP DEFAULTS
INTEGRATED PERIPHERALS
HARDWARE MONITOR SETUP
SUPERVISOR PASSWORD
USER PASSWORD
CTION
Quit without saving (Y/N) ? N
EXIT WITHOUT SAVING
ESC : Quit ↑↓→← : Select Item (Shift) F2 : Change Color F5 : Old Values
F6 : Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit
Abandon all Datas & Exit Setup

Figure 14: Exit Without Saving

Type "Y" will quit the Setup Utility without saving to RTC CMOS.

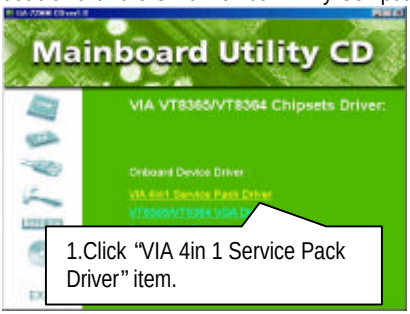
Type "N" will return to Setup Utility.

Appendix

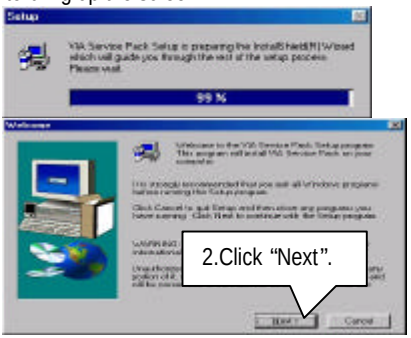
Appendix A: VIA VT8365/VT8364 Chipsets Driver Installation

A.VIA 4 in 1 Service Pack Utility:

Insert the support CD that came with your motherboard into your CD-ROM driver or double –click the CD driver icon in My Computer to bring up the screen.


Mainboard Utility CD
VIA VT8365/VT8364 Chipsets Driver:
Onboard Device Driver
VIA 4in1 Service Pack Driver
1.Click “VIA 4in 1 Service Pack Driver” item.

(1)



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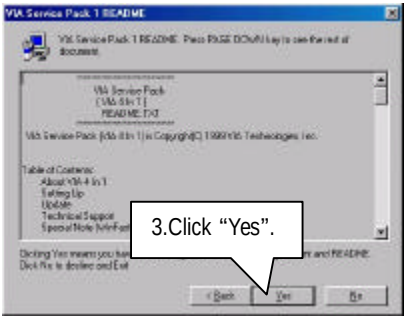

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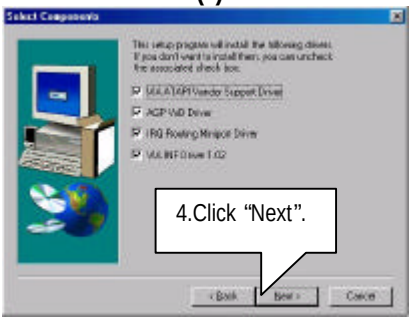

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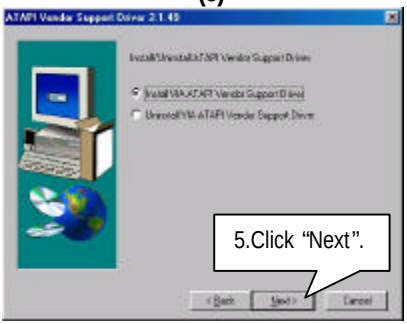

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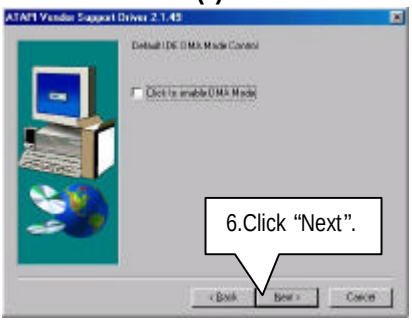

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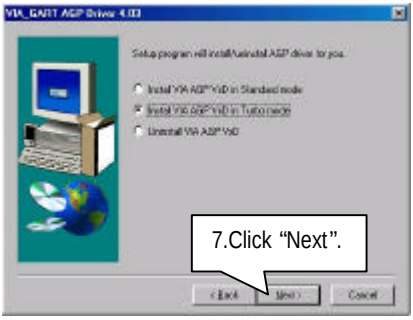

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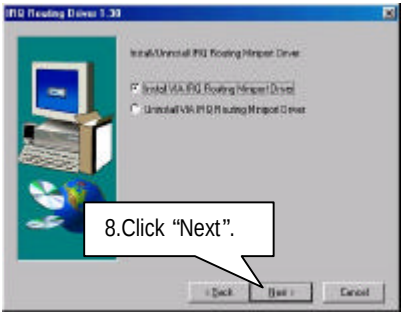

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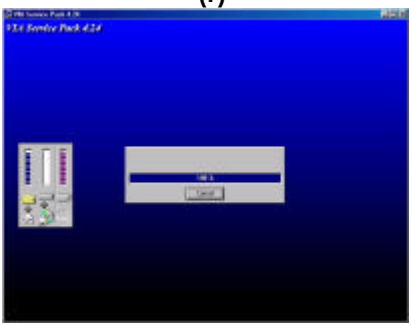

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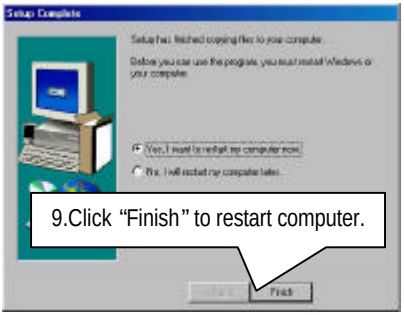

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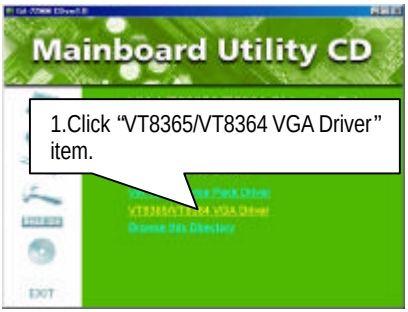
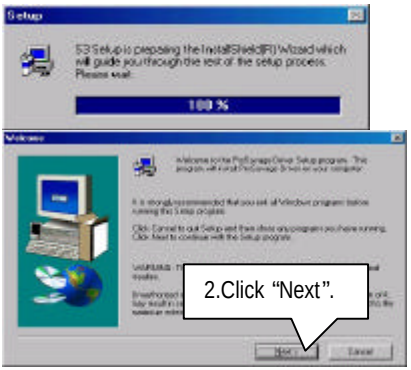
B.VT8365/VT8364 VGA Driver:

Insert the support CD that came with your motherboard into your CD-ROM driver or double –click the CD driver icon in My Computer to bring up the screen.



(1)



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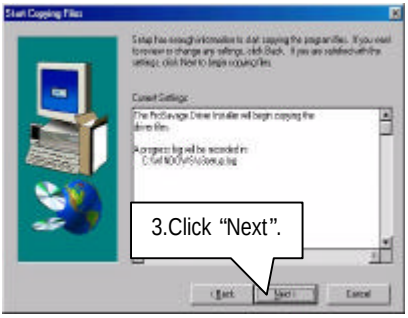

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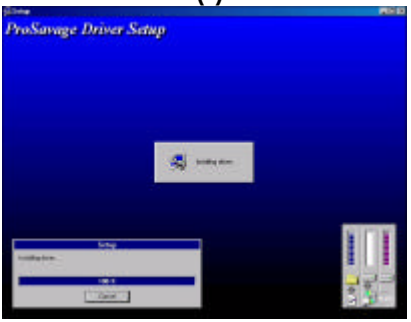

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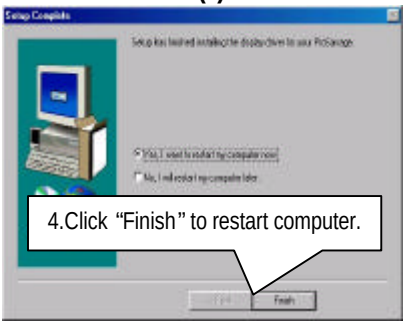


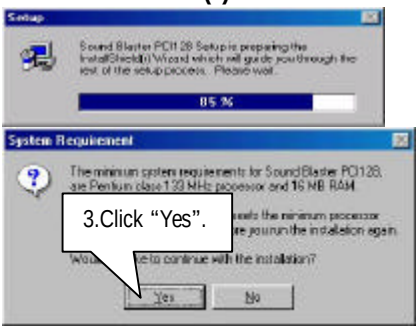
(5)

Appendix B: Creative Sound Driver Installation

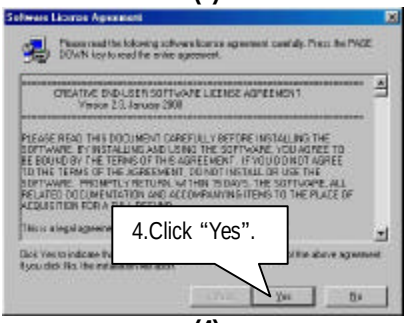
Insert the support CD that came with your motherboard into your CD-ROM driver or double –click the CD driver icon in My Computer to bring up the screen.

(1)

(2)


Setup
Sound Blaster PCI128 Setup is preparing the InstallShield(r) Wizard which will guide you through the rest of the setup process. Please wait.
85 %
System Requirement
3.Click “Yes”.
Yes
No

(3)



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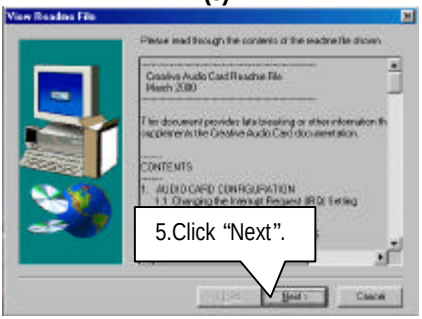

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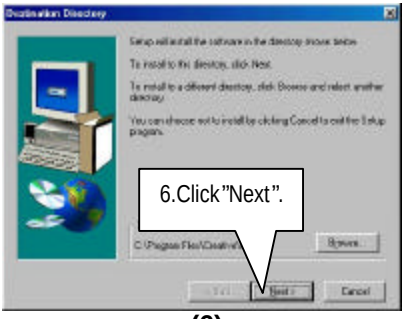

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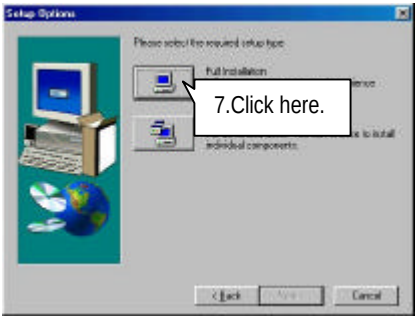
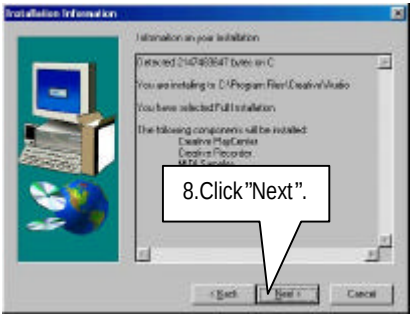

Setup Options
Please select the required setup type.
Full Installation
7.Click here.
individual components.
< Back
Next >
Cancel

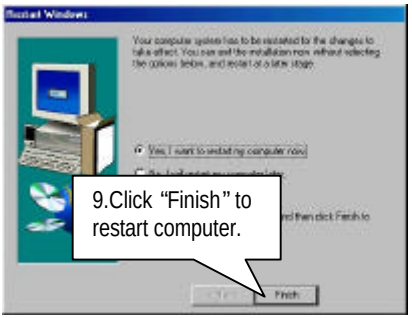
(7)


Installation Information
Creative PlayCenter
Creative Recorder
8.Click"Next".
< Back
Next >
Cancel

(8)

CREATIVE

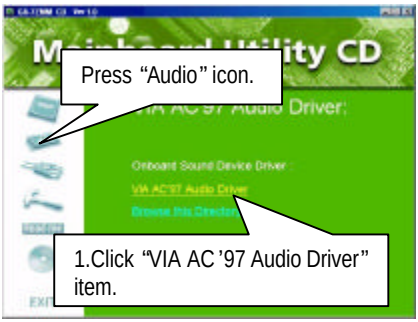
(9)


Restart Windows
9.Click "Finish" to restart computer.
Finish

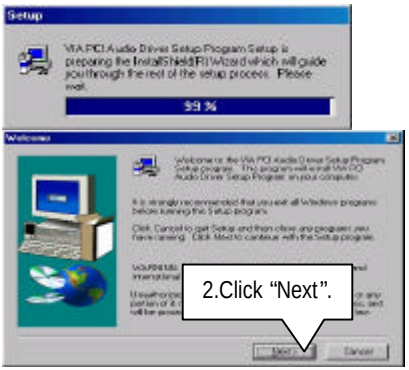
(10)

Appendix C: VIA AC'97 Audio Driver (Optional)

Insert the support CD that came with your motherboard into your CD-ROM driver or double –click the CD driver icon in My Computer to bring up the screen.



(1)



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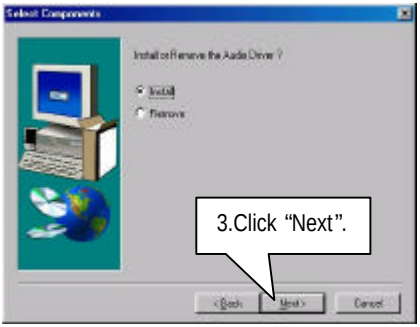

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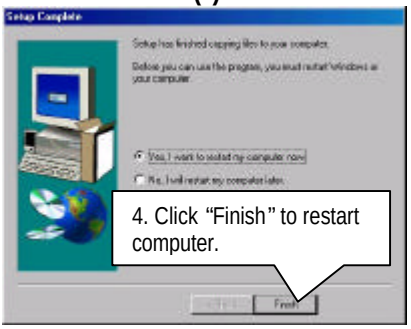
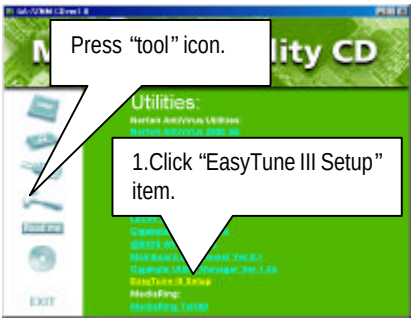


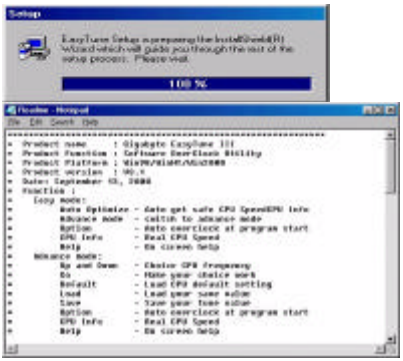
(4)

Appendix D: EasyTuneIII Setup

Insert the support CD that came with your motherboard into your CD-ROM driver or double –click the CD driver icon in My Computer to bring up the screen.



(1)



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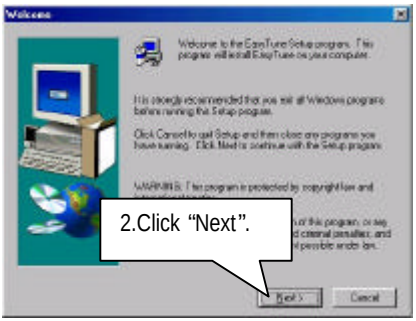

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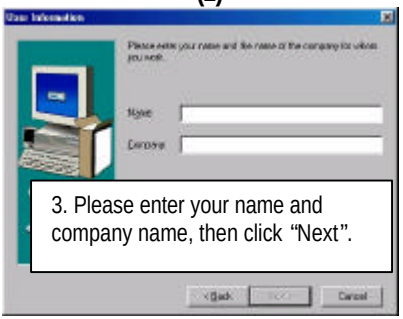

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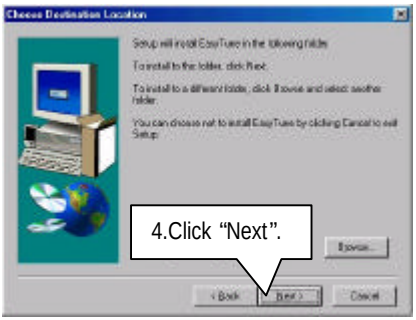

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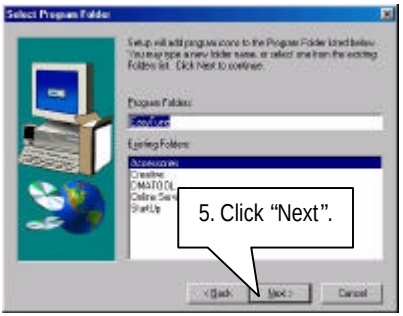
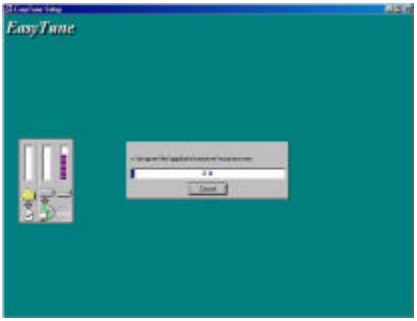
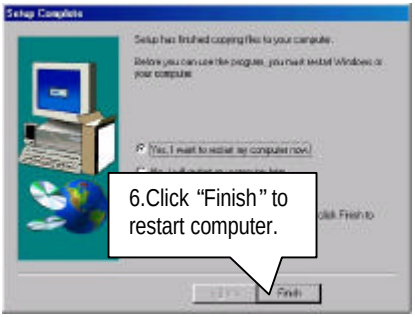


(6)


EasyTune

(7)

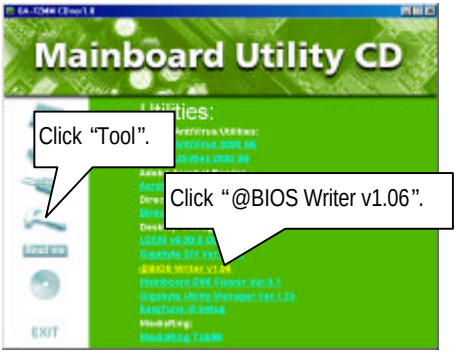

Setup Complete
6.Click “Finish” to restart computer.
Finish

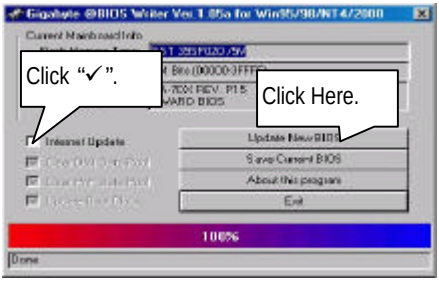
(8)

Appendix E: BIOS Flash Procedure

BIOS update procedure:

If your OS is Win9X, we recommend that you used Gigabyte @BIOS™ Program to flash BIOS.





Methods and steps:

I. Update BIOS through Internet

a. Click "Internet Update" icon

b. Click "Update New BIOS" icon

c. Select @BIOS™ sever ("Gigabyte @BIOS™ sever 1 in Taiwan" and "Gigabyte @BIOS™ sever 2 in Taiwan" are available for now, the others will be completed soon)

d. Select the exact model name on your motherboard

e. System will automatically download and update the BIOS.

II. Update BIOS NOT through Internet:

a. Do not click "Internet Update" icon

b. Click "Update New BIOS"

c. Please select "All Files" in dialog box while opening the old file.

d. Please search for BIOS unzip file, downloading from internet or any other methods (such as: 7ZMM.F1).

e. Complete update process following the instruction.

III. Save BIOS

In the very beginning, there is "Save Current BIOS" icon shown in dialog box. It means to save the current BIOS version.

IV. Check out supported motherboard and Flash ROM:

In the very beginning, there is "About this program" icon shown in dialog box. It can help you check out which kind of motherboard and which brand of Flash ROM are supported.

Note:

a. In method I, if it shows two or more motherboard's model names to be selected, please make sure your motherboard's model name again. Sellecting name will cause the system unbooted.

b. In method II, be sure that motherboard's model name in BIOS unzip file are the same as your motherboard's. Otherwise, your system won't boot.

c. In method I, if the BIOS file you need cannot be found in @BIOS™ server, please go onto Gigabyte's web site for downloading and updating it according to method II.

d. Please note that any intercorruption during updating will cause system unbooted

Or else you can select flash BIOS in DOS mode.

- Please check your **BIOS vendor (AMI or AWARD)**, your **motherboard name** and **PCB version** on the motherboard.

1. Format a bootable system floppy diskette by the command "**format a:/s**" in command mode.
2. Visit the Gigabyte website at http:// www.gigabyte.com.tw , Select the BIOS file you need and download it to your bootable floppy diskette.
3. Insert the bootable diskette containing the BIOS file into the floppy diskette driver.
4. Assuming that the floppy diskette driver is A, reboot the system by using the A: driver. At the A: > prompt, run the BIOS upgraded file by executing the Flash BIOS utility and the BIOS file with its appropriate extension.

   Example: *(AMI tool)* *(Where 7zmm.f1 is name of the BIOS file name)*

   A:>*flashxxx.exe 7zmm.f1* ↵

   Example: *(Award tool)* *(Where 7zmm.f1 is name of the BIOS file name)*

   A:>*Awdflash.exe 7zmm.f1* ↵
5. Upon pressing the <Enter> key, a flash memory writer menu will appear on screen. Enter the new BIOS file name with its extension filename into the text box after file name to program.
6. If you want to save the old BIOS file(perform as soon as system is operational, this is recommended), select Y to **DO YOU WANT TO SAVE BIOS**, then type the old BIOS filename and the extension after filename to save: This option allows you to copy the contents of the flash memory chip onto a diskette, giving you a backup copy of the original motherboard BIOS in case you need to re-install it. Select N to **DO YOU WANT TO SAVE BIOS**, if you don 't want to save the old BIOS file.
7. After the decision to save the old BIOS file or not is made, select Y to **ARE YOU SURE TO PROGRAM** when the next menu appear; wait until a message showing Power Off or Reset the system appears. Then turn off your system.
8. Remove the diskette and restart your system.
9. Hold down <Delete> key to enter BIOS setup. You must select "Load Setup BIOS Default" to activate the new BIOS, then you may set other item from the main menu.

Appendix F: Issues To Beware Of When Installing AMR

Please use inverse AMR card like the one in order to avoid mechanical problem. (See Figure A)

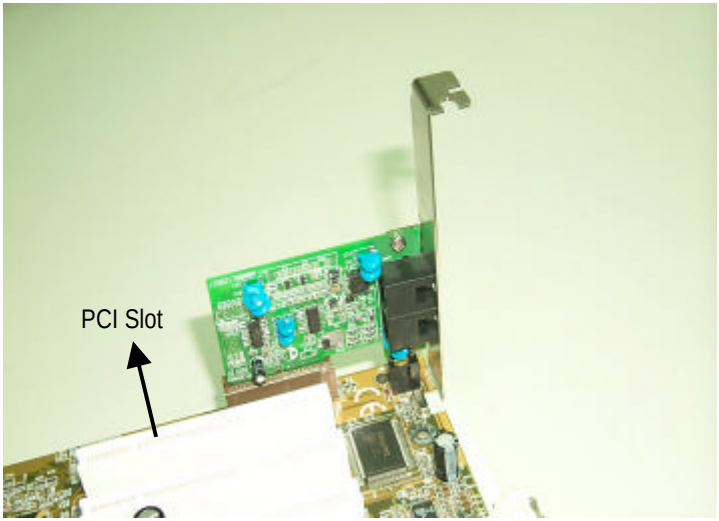


Figure A: Inverse AMR Card (Default)

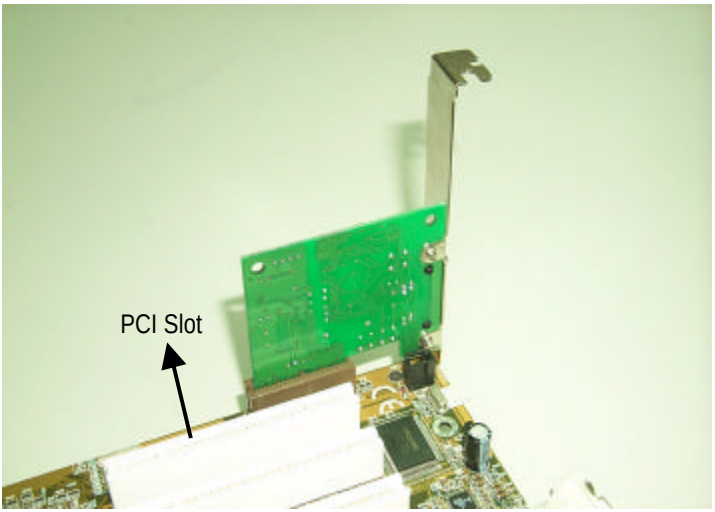


Figure B: Non inverse AMR Card

Appendix G: Acronyms

Acronyms	Meaning
ACPI	Advanced Configuration and Power Interface
APM	Advanced Power Management
AGP	Accelerated Graphics Port
AMR	Audio Modem Riser
ACR	Audio Communication Riser
BIOS	Basic Input / Output System
CPU	Central Processing Unit
CMOS	Complementary Metal Oxide Semiconductor
CRIMM	Continuity RIMM
CNR	Communication and Networking Riser
DMA	Direct Memory Access
DMI	Desktop Management Interface
DIMM	Dual Inline Memory Module
DRM	Dual Retention Mechanism
DRAM	Dynamic Random Access Memory
DDR	Double Data Rate
ECP	Extended Capabilities Port
ESCD	Extended System Configuration Data
ECC	Error Checking and Correcting
EMC	Electromagnetic Compatibility
EPP	Enhanced Parallel Port
ESD	Electrostatic Discharge
FDD	Floppy Disk Device
HDD	Hard Disk Device
IDE	Integrated Dual Channel Enhanced
IRQ	Interrupt Request
I/O	Input / Output
IOAPIC	Input Output Advanced Programmable Input Controller
ISA	Industry Standard Architecture
LAN	Local Area Network
LBA	Logical Block Addressing
LED	Light Emitting Diode
MHz	Megahertz
MIDI	Musical Interface Digital Interface
MTH	Memory Translator Hub
MPT	Memory Protocol Translator
NIC	Network Interface Card
OS	Operating System

To be continued...

Acronyms	Meaning
OEM	Original Equipment Manufacturer
PAC	PCI A.G.P. Controller
POST	Power-On Self Test
PCI	Peripheral Component Interconnect
RIMM	Rambus in-line Memory Module
SCI	Special Circumstance Instructions
SECC	Single Edge Contact Cartridge
SRAM	Static Random Access Memory
SMP	Symmetric Multi-Processing
SMI	System Management Interrupt
USB	Universal Serial Bus
VID	Voltage ID